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#### BCT Meeting Agenda October 21, 2003, 10:00 - 16:00 Tetra Tech - San Francisco Office 135 Main Street, Suite 1800

1000	New Navv	Rucinocc	(Kaith	Forman)
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- New business
- Next BCT meeting and review of upcoming meetings
- 1015 Action Item List Review (Keith Forman)
- 1030 FFA Schedule Update (Keith Forman)
- 1045 Treatability Study Update (Glenn Christensen)
  - Sequential aerobic/anaerobic treatability study Building 134, Parcel C
  - Phyto-groundwater extraction treatability study IR-01/21, Parcel E
- 1130 Update on Landfill Storm Water Management (Charles "Maz" Mazowiecki)
  - Present update on sedimentation basin construction
- 1145 Lunch
- 1245 Update on Landfill Gas Removal Action (Charles "Maz" Mazowiecki)
  - Provide update on maintenance activities
- 1345 Parcel E Shoreline Update (Jose Payne)
  - Discuss current and proposed actions along shoreline
- 1415 Follow-on Parcel B Strategy Discussion (Ryan Ahlersmeyer)
  - Discuss status of Parcel B technical issues
- Open Forum for Discussion of Navy's Proposal to Modify Soil Human Health Risk Assessment Methodology
- 1515 **Document Review Matrix** (Keith Forman)
  - Brief discussion of document and status of agency review
  - Identify potential need for follow-on discussion
- 1525 Radiological Program Update (Laurie Lowman, RASO)
  - Update on HRA and status of surveys on base
- 1555 Review Action Items (Keith Forman)
- 1600 Adjourn

### Hunters Point Shipyard Meeting Attendance Sheet

Topic:

**BCT** Meeting

Location:

Tetra Tech, San Francisco Office

Date/Time:

October 21, 2003 / 10:00 a.m.

Name	Phone Number	E-Mail Address	Present
Keith Forman	619.532.0913	FormanKS@efdsw.navfac.navy.mil	151
Patrick Brooks	619.532.0930	BrooksGP@efdsw.navfac.navy.mil	PB
Charles Mazowiecki	619.532.0902	MazowieckiCR @efdsw.navfac.navy.mil	1423
Ryan Ahlersmeyer	619.532.0960	AhlersmeyerRN@efdsw.navfac.navy.mil	PA
Glenn Christensen	619.532.0924	ChristensenGW@efdsw.navfac.navy.mil	GC
Mark Walden	619.532.0931	WaldenML@efdsw.navfac.navy.mil	mul
Jose Payne	619.532.0962	PayneJE@efdsw.navfac.navy.mil	321
Michael Pound	619.532.2546		222
Invielow wan	157-887-4692		888
	757-887-4692	lowman rue raso, my v. mil	OK-
Michael Work	415.972.3024	Work.Michael@epa.gov	mw
Chein Kao	510.540.3822	ckao@dtsc.ca.gov	OK
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Julie Menack	510.622.2401	ism@rb2.swrcb.ca.gov	JSM
			<u> </u>
Amy Brownell	415.252.3967	amy.brownell@sfdph.org	ADB
		golson@sfwater.org	7/2
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Julia Vetromile	415.222.8225	Julia.Vetromile@ttemi.com	Dev
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December City			
			-
Arvind Acharva	925,946,3100	aacharya@itsi.com	<b>-</b> /-
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SHO KEIGH	12420000	CHAIR THE THE CONTRACT OF THE	
Gerry Slattery	415 671 1990	gslattery@ttfwi.com	(2)
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Greini Stari	017.234.0070	gstarre trwi.com	
Karla Brasaemle	415 281 8730	khrasaemle@techlawing.com	VD
Kana Diasaciile	713.201.0730	Korasaenne & teetnawine.com	KB
Lea Loizos	(b) (6)	(b) (6)	<del> </del>
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Barbara Bushnell	(b) (6)	(b) (6)	00
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Cian Dawson	(b) (6)	(b) (6)	06D-
	Keith Forman Patrick Brooks Charles Mazowiecki Ryan Ahlersmeyer Glenn Christensen Mark Walden Jose Payne Michael Pound Laurel Laurel Michael Work Chein Kao Eileen Hughes Julie Menack Laurent Meillier  Amy Brownell Gregg Olson Jesse Blout Bob Hocker Dorinda Shipman Jaque Forrest Diane Sarmiento Sigrida Keinis Julia Vetromile Doug Bielskis Debbie Cheng  Arvind Acharya  LAN LEIGH  Gerry Slattery Glenn Starr  Karla Brasaemle  Lea Loizos	Reith Forman   619.532.0913     Patrick Brooks   619.532.0930     Charles Mazowiecki   619.532.0902     Ryan Ahlersmeyer   619.532.0960     Glenn Christensen   619.532.0924     Mark Walden   619.532.0931     Jose Payne   619.532.0962     Michael Pound   619.532.2546     Lauric Lowyran   757-867-4612     Dick Lauryran   767-867-4612     Dick Lauryran   767-861-4612     Michael Work   415.972.3024     Chein Kao   510.540.3822     Eileen Hughes   510.540.3760     Julie Menack   510.622.2401     Laurent Meillier   510.622.2440     Amy Brownell   415.252.3967     Gregg Olson   415.554.3262     Jesse Blout   415.554.6477     Bob Hocker   415.995.1770     Dorinda Shipman   415.394.8713     Jaque Forrest   510.251.2888     Diane Sarmiento   510.251.2888     Signida Reinis   415.222.8242     Debbie Cheng   415.222.8242     Debbie Cheng   415.222.8215     Arvind Acharya   925.946.3100     Dan Leigh   415.222.8215     Gerry Slattery   415.671.1990     Glenn Starr   619.234.8696     Karla Brasaemle   415.281.8730     Lea Loizos   65 (6) (6)	Reith Forman

#### **HUNTERS POINT SHIPYARD BASE REALIGNMENT AND CLOSURE CLEANUP TEAM ACTION ITEMS**

Action	Date Identified	Responsible Party	Date Due	Date Accomplished	Notes
Basewide: EPA and DTSC to discuss Navy's proposed open space criteria and other human health risk assessment technical issues.	23-Jul-03	Keith Forman (Navy) Tetra Tech	TBD	07-Oct-03	The Navy distributed a draft letter addressing risk assessment issues on October 7. Conference call between the Navy and EPA/DTSC risk assessors will be conducted after sufficient regulatory review.
Basewide: Follow up on ecological criteria discussions with RWQCB.	23-Sep-03	Keith Forman (Navy) Julie Menack (RWQCB) Tetra Tech	TBD		To be further discussed at October BCT meeting and during scoping meeting for Parcel B tech memo in support of the ROD amendment.
Basewide: Distribute a revised organizational chart specifying the RPMs and their responsibilities.	23-Sep-03	Keith Forman (Navy)	TBD	21-Oct-03	Distributed at October BCT meeting
Parcel B: EPA will check guidance regarding the ARARs discussion in the five-year review report to verify whether ARARs from the 1997 ROD should be "frozen."	23-Sep-03	Michael Work (EPA)	TBD		
Parcel B: Schedule a scoping meeting and separate storyboard presentation to discuss the technical memorandum in support of the ROD amendment. Compile a list of Parcel B issues requiring resolution.	23-Sep-03	Ryan Ahlersmeyer (Navy) Tetra Tech	TBD		Pending resolution of risk assessment technical issues
Parcel E: Clarify the submittal schedule for the landfill gas closeout report.	26-Aug-03	Charles Mazowiecki (Navy) Tetra Tech	2-Sep-03	23-Sep-03	Submittal planned for December.
Parcel E: Provide an update of the IR-03 NETTS status at an upcoming BCT meeting.	23-Sep-03	Charles Mazowiecki (Navy) Tetra Tech	TBD		Update planned for December BCT meeting.

#### HUNTERS POINT SHIPYARD BASE REALIGNMENT AND CLOSURE CLEANUP TEAM ACTION ITEMS

Action	Date Identified	Responsible Party	Date Due	Date Accomplished	Notes
Parcel E: Send an email with the hazardous waste statistics from previous IR-02 soil samples	23-Sep-03	Ryan Alhersmeyer (Navy) Tetra Tech	TBD	29-Sep-03	
<b>Groundwater:</b> Schedule a field trip to observe the zero valent iron treatability study.	26-Aug-03	Pat Brooks (Navy) Michael Work (EPA) Chein Kao (DTSC) Julie Menack (RWQCB)	TBD	Sep-03	Field trip conducted on 24-Sep-03
Groundwater: Distribute a table listing basewide sewer line repairs that were conducted by the caretaker site office.	26-Aug-03	Pat Brooks (Navy) Glenn Christensen (Navy)	TBD		Review and compilation of data from Navy caretaker site office ongoing
Groundwater: Verify that the conclusions of the final Parcel E groundwater summary report are reflected in the groundwater monitoring plan.	23-Sep-03	Glenn Christensen (Navy)	20-Nov-03		To be reflected in draft groundwater monitoring plan

Notes:			
ARAR	Applicable or relevant and appropriate requirement	NETTS	National Environmental Technology Test Sites
BCT	Base Realignment and Closure Cleanup Team	ROD	Record of decision
DTSC	Department of Toxic Substances Control	RPM	Remedial project manager
EPA	Environmental Protection Agency	RWQCB	Regional Water Quality Control Board
IR	Installation restoration	TBD	To be determined
Navy	Department of the Navy	Tetra Tech	Tetra Tech EM Inc.

#### Recent Completed Review Periods Document Review Matrix Hunters Point Shipyard

			Submittal	Expected Date		Age	ency Submitta	I of Comme	nts
item	Parcel	Document Name	Date	for Comments	Notes	EPA	DTSC	RWQCB	City of SF
1	В	Draft Construction Summary Report	11/18/2002	4/15/2003	EPA requested extensions (original date was 1/3/2003); RTCs planned for November 2003 pending resolution of comments	5/8/2003	4/7/2003	4/4/2003	•
2	E	Draft Final Landfill Cap Removal Action Closeout Report	2/4/2003	4/18/2003	Document to be finalized in December 2003	3/31/2003	*	4/16/2003	
3	Basewide	. Draft BRAC Business Plan	4/2/2003	5/19/2003	Final document planned for December 2003 pending resolution of agency comments	5/19/2003	5/27/2003	*	
4	E	Draft Landfill Gas Characterization Report	5/15/2003	6/30/2003	Final report with RTCs planned for submittal in November 2003	6/16/2003	7/1/2003 (Addt comments received 7/9/2003)	*	
5	E	Draft Landfill Lateral Extent Report	5/15/2003	6/30/2003	RTCs planned for submittal in November 2003	6/20/2003	6/26/2003	6/30/2003	
6	Basewide	Draft Community Involvement Plan	6/6/2003	7/21/2003	Review period extended to 8/12/2003 to accommodate community members; draft final document with RTCs submitted on 10/2/2003; final document with RTCs planned for 12/5/2003	7/17/2003	*		
7	E	Draft Phase III GDGI Parcel E Report	5/21/2003	8/8/2003	RWQCB requested 31-day extension (original date was 7/7/2003); revised report w/ RTCs planned for 10/17/03	7/28/2003	8/8/2003 (general), 9/2/03 (specific)	8/11/2003	
8		Draft Five-Year Review Document	7/8/2003	8/22/2003	Draft final document with RTCs submitted on 9/22/2003 (see "Documents currently under review")	8/18/2003	8/22/2003	9/4/2003	
9		Draft Workplan for Ferox Injection Treatability Study at Buildings 123 and 272	7/11/2003	8/25/2003	Final document with RTCs planned for November 2003	8/25/2003			
10	B/C/D/E	Request for Drinking Water Determination	8/11/2003	9/25/2003	For RWQCB review	n/a	n/a	9/19/2003	n/a

#### Notes:

\* - comments deferred to other agency

n/a - not applicable

TBD - to be determined

#### Ongoing Review Periods Document Review Matrix Hunters Point Shipyard

			Submittal	Expected Date		Age	ncy Submitt	al of Commer	nts
Item	Parcel	Document Name	Date	for Comments	Notes	EPA	DTSC	RWQCB	City of SF
					RWQCB requested 4-day extension				
			1		(original date was 9/15/2003); final	1			1
		,			document with RTCs planned for				
					January 2004 pending receipt of agency				
1	£	Draft Landfill Liquefaction Potential Report	8/1/2003	9/19/2003	comments	8/29/2003		10/2/2003	9/18/2003
					Expedited review requested to				
			i		accommodate field work schedule; Final				
		Draft Workplan for Feasibility Study Data Gaps			work plan and RTCs submitted on				
2	F	Investigation	8/21/2003	9/8/2003	10/13/2003	Sep-03		9/17/2003	
					Final document with RTCs planned for				-
		Draft April to June 2003 Quarterly Groundwater			November 2003 pending receipt of				
3	В	Monitoring Report	8/22/2003	10/3/2003	agency comments	10/8/2003			1
				•	Final document with RTCs planned for				
			1		11/21/2003 pending receipt of agency				
4	В	Draft Final Five-Year Review Document	9/22/2003	10/22/2003	comments				
					RTCs planned for 12/12/2003 pending	1			
5	В	Workplan for follow-on SVE Treatability Study	9/26/2003	11/10/2003	receipt of agency comments				
					Final document with RTCs planned for	Ī			
		Workplan for Sequential Anaerobic/Aerobic			12/19/2003 pending receipt of agency				
6	C	Treatability Study at Building 134	10/2/2003	11/17/2003	comments			1	
					RTCs planned for 12/17/2003 pending				
7	В_	Draft Shoreline Data Gaps Technical Memorandum	10/3/2003	11/17/2003	receipt of agency comments				
		Request for Concurrence on Proposed Criteria and							
		Process for Evaluating Petroleum Hydrocarbons in	•						
8	B/C/D/E	Soil	10/13/2003	TBD	For RWQCB review/response				
		Technical Proposal for Revisions to Soil Human			To initiate technical discussion with risk				
9	В	Health Risk Assessment Methodology	10/14/2003	TBD	assessment specialists			<u> </u>	
		Request for Identification of Applicable or Relevant				I		1	
		and Appropriate Requirements (for proposed ROD			ARARs resolution planned for 12/3/2003				1
10	В	amendment)	10/14/2003	11/6/2003	pending receipt of agency comments				1

#### Notes:

\* - comments deferred to other agency n/a - not applicable TBD - to be determined

10/21/2003

# Upcoming Review Periods Document Review Matrix Hunters Point Shipyard

	-		Approximate	Expected Date	
Item	Parcel	Document Name	Submittal Date	for Comments	Notes
		Draft Final Historical Radiological Assessment,	11/4/2003	45 days from	
1	Basewide	Volume II	11/4/2003	submittal date	Tentative submittal date
					Final document with RTCs
					planned for 1/12/2004
		Workplan for Phyto-Groundwater Extraction		45 days from	pending receipt of agency
2	E	Treatability Study Work Plan	11/14/2003	submittal date	comments
		Draft July to September 2003 Quarterly		21 days from	
3	В	Groundwater Monitoring Report	11/14/2003	submittal date	Tentative submittal date
				45 days from	
4	B/C/D/E	Draft Groundwater Monitoring Plan	11/20/2003	submittal date	Tentative submittal date
				45 days from	
5	E	Workplan for Parcel E IR-02 Removal Action	11/21/2003	submittal date	Tentative submittal date
				45 days from	
6	F	Field Summary Report for Supplemental Field Work	11/24/2003	submittal date	Tentative submittal date
				30 days from	
7	F	Draft Final Validation Study Report	12/1/2003	submittal date	Tentative submittal date
		Action Memorandum for Time-Critical Removal		30 days from	
8	D	Action	12/1/2003	submittal date	Tentative submittal date
				45 days from	
9	D	Workplan for Time-Critical Removal Action	12/1/2003	submittal date	Tentative submittal date
		Draft Shoreline Characterization Technical		45 days from	
10	E	Memorandum	12/9/2003	submittal date	Tentative submittal date
]	ļ			45 days from	
11	E	Draft Landfill Gas Removal Action Closeout Report	12/19/2003	submittal date	Tentative submittal date
[				45 days from	
12	В	Draft CAP Addendum	1/6/2004	submittal date	Tentative submittal date
		Interim Data Analysis Document for Standard Data		45 days from	<u> </u>
_ 13	<u> </u>	Gaps Investigation	1/9/2004	submittal date	Tentative submittal date

#### Notes:

\* - comments deferred to other agency

n/a - not applicable

TBD - to be determined

#### Project Team Contact Information Hunters Point Shipyard Navy Southwest Division

Last Name	First Name	Phone	Projects Assigned	Mail Code	E-mail .	Currently Active?
Ahlersmeyer	Ryan	(619) 532-0960	RPM - Parcel B and F activities, Bldg 123 SVE/ZVI treatability studies, IR-02 (radium dial) removal action	06CH.RA	ahlersmeyerrn@efdsw.navfac.navy.mil	
					ryan.ahlersmeyer@nmci-isf.com	X
Brooks	Pat (619) 532-0930 Lead RPM & RPM for radiological 06CH.GE activities		06CH.GB	brooksgp@efdsw.navfac.navy.mil		
					george.brooks@navy.mil	
					george.brooks@nmci-isf.com	X
Christensen	Glenn	(619) 532-0924	RPM - basewide groundwater, emergent chemicals, phyto-groundwater extraction and anaerobic/aerobic treatability studies, and Parcel C activities	06CH.GC	christensengw@efdsw.navfac.navy.mil	x
			To a series of the series of t		glenn.christensen@nmci-isf.com	
Forman	Keith	(619) 532-0913 BEC - Community Involvement Plan, Community Notification Plan, BRAC Business Plan	, -	06CH.KF	formanks@efdsw.navfac.navy.mil	x
			To come and the co		keith.forman@navy.mil	
Mazowiecki	Charles	(619) 532-0902	RPM - Parcel E landfill gas removal action, Parcel E non-standard data gaps investigation, basewide stormwater and soil stockpile mgmt, IR-03 treatability studies	06CH.CM	mazowieckicr@efdsw.navfac.navy.mil	
			T per angel		charles.mazowiecki@nmci-isf.com	X
Payne	Jose	(619) 532-0962	RPM - TPH program, waste consolidation program, Parcel A FOST, Parcel E metal slag/metal reef removal action	06CH.JP	payneje@efdsw.navfac.navy.mil	
·					jose.payne@navy.mil	X
Potacka	Marianna	(619) 532-09	RPM - Community Relations	06CH.MP	potackamk@efdsw.navfac.navy.mil	X
					marianna.potacka@navy.mil	
Walden	Mark	(619) 532-0931	RPM - Parcel D activities, Parcel E soil data gaps investigation, Dry Dock 4 activities	06CH.MW	waldenml@efdsw.navfac.navy.mil	. <b>X</b>
			-		mark.walden@nmci-isf.com	

#### Office address:

Naval Facilities Engineering Command Southwest Division 1230 Columbia Street, Suite 1100 San Diego, CA 92101-8517 Fax: (619) 532-0995

## HUNTERS POINT SHIPYARD BASE REALIGNMENT AND CLOSURE CLEANUP TEAM MEETING MINUTES

#### **OCTOBER 21, 2003**

These minutes summarize the Hunters Point Shipyard (HPS) Base Realignment and Closure (BRAC) Cleanup Team (BCT) meeting held on October 21, 2003, at Tetra Tech EM Inc.'s (Tetra Tech) office in San Francisco, California. Meeting attendees included the BCT, which comprises representatives from the U.S. Department of the Navy (Navy), the U.S. Environmental Protection Agency (EPA), the California Department of Toxic Substances Control (DTSC), and the California Regional Water Quality Control Board (RWQCB). The City of San Francisco (City), its team of developers, and Navy consultants also attended the meeting. These minutes discuss the key points, decisions, and action items agreed to at the meeting. A list of attendees is included as Attachment A. A complete list of action items is included as Attachment B. The revised document review matrix is included as Attachment C.

#### 1.0 AGENDA

- New Navy Business
- Action Item List Review
- Treatability Study Update
- Follow-on Parcel B Strategy Discussion
- Open Forum for Discussion of Navy's Proposal to Modify Soil Human Health Risk Assessment Methodology
- Update on Landfill Storm Water Management
- Update on Landfill Gas Removal Action
- Parcel E Shoreline Update
- Federal Facilities Agreement (FFA) Schedule Update
- Document Review Matrix
- Radiological Program Update
- New Action Items

#### 2.0 NEW NAVY BUSINESS

The Navy distributed contact information for the HPS project team, and mentioned that they are looking for a new remedial project manager (RPM) to oversee radiological activities. The Navy also mentioned that Ms. Julia Vetromile (Tetra Tech) is the new co-installation coordinator, along with Mr. Doug Bielskis. Mr. Bielskis will remain the primary point of contact for

receiving information. The Navy will distribute the team's contact information electronically, and will send updates when the list is revised.

Mr. Keith Forman (Navy) stated that the Finding of Suitability to Lease (FOSL) for Buildings 368, 369, 415, and 416 is being updated in order to accommodate the artists that are being relocated from Building 366 due to upcoming construction activities at that building.

The Navy will be distributing weekly updates to inform the BCT about each RPM's activities. Field work and major upcoming documents will be highlighted. The Navy is still working on the October update of the FFA schedule and anticipates distributing it within the next two weeks. Document review periods will be altered to account for the upcoming holidays, but the revised schedule must be approved by Navy management.

An information fair for the HPS community will be held on November 15 at the EP Mills facility from 10 a.m. to 3 p.m. The next BCT meeting is scheduled for December 2, followed by the restoration advisory board meeting on December 4. Due to a scheduling conflict at Tetra Tech, the December BCT meeting will be held at the RWQCB office in Room 1411. The Navy would still like to hold a BCT meeting in San Diego and will discuss this option further with the BCT. The January BCT meeting is scheduled for January 20.

#### 3.0 ACTION ITEM LIST REVIEW

The Navy reviewed action items from the September 2003 BCT meeting and discussed their current status. In reviewing the action item regarding development of a human health risk methodology for open space areas, Mr. Bob Hocker (Lennar BVHP) stated that the HPS community wanted to know whether children would be able to play in the open space area of Parcel B. The Navy indicated that this topic would be discussed later in the meeting, but mentioned that they like to resolve the issue regarding the "floating W," or the potential future wetlands area, that is included in the City's redevelopment plan for Parcel B. Ms. Julie Menack (RWQCB) stated that if there is a desire to rescind the current RWQCB order for wetlands creation at HPS to mitigate wetlands loss at San Francisco Airport, the request must come from the San Francisco Airport, and then approved by RWQCB management. In addition, Ms. Amy Brownell (City) clarified that regardless of the status of the RWQCB order, the HPS redevelopment plan specification for future wetlands would remain, and could only be eliminated by a formal revision to the redevelopment plan.

#### 4.0 TREATABILITY STUDY UPDATE

Mr. Glenn Christensen (Navy) provided an update on the anaerobic/aerobic treatability study that will be conducted at RU-C5. Ms. Menack (RWQCB) stated that cross-sections and data from the Phase III groundwater data gaps investigation (GDGI) were not referred to in the treatability study work plan. The Navy will update text and figures in the work plan to reflect information in the GDGI report. During the presentation, Ms. Menack reiterated that it would be helpful to view a cross-section showing subsurface formations, bedrock, and dense non-aqueous phase

liquid in order to analyze the potential migration pathways. Ms. Menack wanted to ensure that the Navy had full control over the groundwater that is injected and extracted; she specified that deeper wells should be monitored and that more hydrogeologic information should be provided.

Baseline soil samples will be collected from the treatment zone at 10 and 15 feet below ground surface. The duration of the study will be about one year. Groundwater flow through the treatment system will be about 0.5 gallons per minute.

Mr. Christensen (Navy) also provided an update on the phyto-groundwater extraction treatability study at Installation Restoration (IR) Site 01/21. The work plan is currently undergoing Navy quality assurance review. Mr. Christensen clarified that the purpose of the treatability study is to evaluate alternative groundwater control methods from the current groundwater extraction system, which requires significant spending each year for operation, maintenance, and permits to discharge the extracted groundwater into the sewer system. Mr. Christensen clarified that contaminant concentrations in the extracted groundwater, which is tested on a quarterly basis, are sufficiently low to not require any treatment prior to discharge to the sewer system.

The Navy will initially plant four species of trees, then analyze mortality rates and plant more trees as needed. Leaf litter and wood will be checked for accumulated contaminant concentrations. PCBs are present in the soil at the treatability study area, and the Navy will consider a potential soil removal action before implementing the treatability study. Ms. Menack was concerned about planting trees and hindering a future soil removal, and requested that soil and groundwater data in the area be evaluated first.

Mr. Michael Work (EPA) requested that the Navy assemble an information summary describing the background of groundwater extraction system, including the criteria that triggered the action, as well as a summary of available soil and groundwater data.

#### 5.0 FOLLOW-ON PARCEL B STRATEGY DISCUSSION

Mr. Ryan Ahlersmeyer (Navy) provided an update on the path forward for Parcel B, including specifically addressing technical questions raised by DTSC at the September 2003 BCT meeting. The remedy for IR-06 will be addressed in the Parcel C record of decision (ROD). The Parcel B ROD amendment will clarify that the Parcel B boundary has changed since the 1997 ROD, and that IR-06 is now part of Parcel C. The Navy has already consulted its legal counsel regarding the boundary change, and stated that parcel boundaries are administrative in nature and can be changed as the CERCLA process evolves. The parcel boundaries are finalized when the legal description of the parcel boundary is contained in the deed when the land is transferred. EPA agreed that parcel boundaries could be changed prior to land transfer, as long as all sites are addressed. Ms. Brownell (City) clarified that a record of survey exists for the Parcel A boundary.

Contamination at (and potentially beyond) the Parcel B western property line at IR-07 and IR-18 will not be addressed in the ROD amendment or the technical memorandum in support of a ROD amendment (TMSRA). Groundwater data does not support the movement of contamination from

offsite property onto HPS. The Navy checked with its legal counsel and will not pursue the western boundary contamination as part of the CERCLA process for Parcel B; however, DTSC has the option to pursue it independently. Mr. Chein Kao (DTSC) stated that DTSC has not decided whether it is Navy or offsite contamination, and will defer this issue to EPA until HPS is removed from the National Priorities List.

The Navy would like to receive and resolve agency comments on the recently submitted proposal regarding changes to the soil human health risk assessment methodology before scheduling a scoping meeting for the TMSRA. Mr. Kao (DTSC) asked what the cleanup level for soil gas at IR-10 would be and when the soil vapor extraction (SVE) would be stopped, since a rebound period has not been established. Goals and alternatives for the SVE system will be addressed in the TMSRA. Ms. Menack (RWQCB) stated that RWQCB recently published a document on environmental screening levels with trigger levels for soil gas and indoor air concentrations. RWQCB's comments on the SVE work plan cite these documents, that recommend that soil gas concentrations be evaluated instead of soil or groundwater concentrations as a more reliable means of assessing site conditions. RWQCB also cited another guidance document describing procedures for soil gas investigations. Ms. Menack will email Mr. Ahlersmeyer with the electronic links to these documents.

The Navy stated that ecological risk to the Bay, both from soil and groundwater, would be evaluated. However, the Navy stated that ecological risk to terrestrial receptors would not be evaluated given the previous determination that there is no current terrestrial habitat at Parcel B, and that future development is unlikely to create terrestrial habitat. Ms. Menack (RWQCB) stated that the proper criteria have not been established to review the data from the Parcel B shoreline technical memorandum. The Navy will evaluate the effects of the Parcel B shoreline to Parcel F in the TMSRA. The Parcel F team will be heavily involved in the development of ecological criteria, which will be used to evaluate the shoreline data in the TMSRA. Most of the shoreline is designated for open space reuse. Mr. Kao (DTSC) asked whether the Navy would implement a control to prohibit creation of habitat for terrestrial receptors. The Navy will consider appropriate controls in the ROD amendment, but considers planting grass to be part of landscaping, not the creation of habitat. Other bases have treated landscaping in a similar manner. Ms. Brownell (City) stated that wetlands are currently in the HPS redevelopment plan and need to be evaluated unless they are removed from the plan. The Navy and City will discuss this issue.

DTSC raised the issue of potential methane generation at IR-07/18. The Navy clarified that this issue came up during the 5-year review comment period, and is currently being evaluated as part of preparing responses to those comments. The Navy clarified that construction debris was used as fill at IR-07/18 but, given its more inert nature, does not generate the levels of methane found at the industrial landfill. In addition, waste observed in a trench that was dug at the IR-01/21 landfill did not resemble the construction debris observed in the IR-07/18 fill.

The Navy letter addressing open space criteria will be revised to correct one inaccuracy, and revised version will be distributed to the BCT before the end of the BCT meeting. Ms. Brownell (City) stated that the agencies cannot respond to the open space criteria letter until the TMSRA is

reviewed because of references to risk, such as that associated with removed samples. The Navy disagrees and believes that the BCT must resolve these risk assessment issues before issuing the TMSRA, which will include a revised human health risk assessment. The BCT can refer to previous figures provided during the risk management review meetings showing the risk grids at Parcel B.

The Navy announced that the responses to comments on the construction summary report (CSR) would include an example of the new figure format for the CSR addendum (that will present data for sites not included in the original CSR). As previously discussed with the BCT, these figures will not post analytical data directly on them.

## 6.0 OPEN FORUM FOR DISCUSSION OF NAVY'S PROPOSAL TO MODIFY SOIL HUMAN HEALTH RISK ASSESSMENT METHODOLOGY

This discussion was tabled since the Navy agreed to make some minor revisions to the document.

#### 7.0 UPDATE ON LANDFILL STORM WATER MANAGEMENT

Mr. Charles Mazowiecki (Navy) provided an update on the sedimentation basin at IR-01/21. Work was temporarily halted due to the observation of black sandblast grit and the need to evaluate the sandblast grit for potential radiological contamination. Ms. Menack (RWQCB) requested that the BCT be notified immediately whenever contamination is observed in the field. The sedimentation basin is being constructed for storm water control in preparation for the rainy season, since the area is prone to erosion. The entire drainage system in the landfill area will be reevaluated in the Parcel E FS. Water will be stored in the retention basin, reducing erosion and sediment flow to San Francisco Bay. Ms. Menack reiterated that RWQCB has previously requested that the Navy provide chemical data for the region.

Ms. Menack (RWQCB) was concerned about infiltration into the soil and leaching of contaminants into the groundwater. Soil donated by the Bay Area Rapid Transit (BART) system will be used as the base for the sedimentation basin. The BART soil has low permeability, and infiltration will be small. Construction of the sedimentation basin will result in less ponding of surface water than under the current circumstances. The Navy presented non-radiological analytical data that indicated elevated petroleum hydrocarbon concentrations. Laboratory data from samples collected in this area will be added to the remedial investigation and FS reports. The size of the sedimentation basin is smaller than originally proposed due to the adjacent phytogroundwater extraction area, but the basin is now deeper.

#### 8.0 UPDATE ON LANDFILL GAS REMOVAL ACTION

Mr. Mazowiecki (Navy) provided an update on the landfill gas issues, in particular a recent response action taken by the Navy. In late September, as part of ongoing monitoring, methane was detected at 4.9 percent by volume at gas monitoring probe (GMP) 24 located on the University of California, San Francisco (UCSF) compound. The Navy installed over 20

temporary probes in the area to delineate the extent of elevated methane around GMP24, monitoring these probes and existing GMPs in the area, and performed localized gas extraction to reduce the methane concentrations in this area. Based on the available data, the Navy suspects the condition at GMP24 resulted from a small pocket of methane around GMP24. The Navy will perform additional monitoring at and around GMP24 to determine whether or not this assumption is correct. This monitoring will be performed at permanent GMPs and at available temporary GMPs. The Navy cannot assure the long-term availability of the temporary probes since they are constructed of plastic tubing and are be damaged by vehicle traffic in the UCSF compound.

Installation of new GMPs at Crisp Avenue and preparation of a landfill gas monitoring plan has been delayed due to contractual issues. The Navy estimates this work will be awarded in about 4 weeks. Ms. Brownell (City) expressed concern regarding this delay and its potential impact to the transfer of Parcel A. In addition, Ms. Brownell stated that the BCT did not agree on the number of monitoring rounds necessary at the new GMPs at Crisp Avenue. The Navy will propose a sampling frequency for all GMPs in the monitoring plan, which will be submitted to the BCT for review.

The current action memorandum specifies a passive gas control system; however, it was designed in a manner to operate actively. The current action memorandum does not address the entire landfill, and the Navy is evaluating other options and it is possible that the Navy will propose another removal action to address the area south of the existing gas control system.

Mr. Kao (DTSC) was concerned about volatile organic compounds (VOC) detected on Crisp Avenue and would like to see more VOC data. The Navy clarified that, in addition to field measurements for methane and VOCs, the Navy collected two rounds of samples at the Crisp Avenue GMPs for laboratory analysis. These results were used in inhalation risk modeling, using EPA and DTSC guidance that determined that the VOC concentrations did not pose an unacceptable risk to human health. These results were documented in the landfill gas characterization report, which DTSC reviewed and submitted comments in July 2002. The Navy is in the process of responding to comments received on this report. In the interim, the Navy will discuss these concerns with DTSC.

#### 9.0 PARCEL E SHORELINE UPDATE

Mr. Jose Payne (Navy) presented an update on the Parcel E shoreline and waste consolidation activities. Waste consolidation began in early 2002 and included removal of friable asbestos, paint peeling off building walls, and tanks with liquid, as well as the capping of lines. The hazardous waste removal was done in order to better support the finding of suitability to transfer. The Navy has spent \$5.7 million to date and has disposed 220 truckloads of hazardous waste. At Parcels B and D, waste consolidation activities are largely complete, and building windows and doors have been boarded up. At Parcels C and E, the majority of the waste consolidation activities are complete, and the Navy projects that another 30 truckloads of hazardous waste will be generated by the project's completion.

#### 10.0 FFA SCHEDULE UPDATE

This discussion was tabled since preparation of the FFA schedule update is ongoing.

#### 11.0 DOCUMENT REVIEW MATRIX

The matrix was distributed to remaining BCT members. The revised matrix is provided as Attachments C-1, C-2, and C-3 to the minutes.

The Navy will discuss the schedule of the integration meeting to coordinate work between the Parcel E shoreline team and the Parcel F team. An update on the Parcel E standard data gaps will be presented in the January BCT meeting. The work plan for the phyto-groundwater extraction treatability study will be moved to January, to coincide with the standard data gaps information package.

#### 12.0 RADIOLOGICAL PROGRAM UPDATE

Ms. Laurie Lowman (Radiological Affairs Support Office) provided an update on the HPS radiological program, including a status update on the historic radiological assessment (HRA), planned cleanup actions at Building 366 (Parcel D) and IR-02 (Parcel E), and ongoing investigations along the Parcel E shoreline. Based on several technical issues, the final preparation and distribution of the draft final HRA has been postponed until early 2004. Radiological cleanup activities in Building 366, to address low-level contamination found in the inactive ventilation system and several floor drains, will require relocation of the current tenants. The Navy is working to relocate the Building 366 tenants and address their concerns. The Navy is continuing to develop the work plan for the IR-02 removal action that will detail the procedures for handling radiological waste and mixed waste and will specify appropriate health and safety procedures.

#### 13.0 NEW ACTION ITEMS

The revised action item list is attached to the minutes.

#### ATTACHMENT A HUNTERS POINT SHIPYARD BASE REALIGNMENT AND CLOSURE CLEANUP TEAM MEETING ATTENDANCE SHEET

Organization	Name	Telephone Number	E-Mail Address
Department of the Navy	Keith Forman	619.532.0913	keith.s.forman@navy.mil
(Navy)	Patrick Brooks	619.632.0930	george.brooks@navy.mil
	Charles Mazowiecki	619.532.0902	charles.mazowiecki@navy.mil
	Ryan Ahlersmeyer	619.532.0960	ryan.ahlersmeyer@navy.mil
•	Glenn Christensen	619.532.0924	glenn.christensen@navy.mil
	Mark Walden	619.532.0931	WaldenML@efdsw.navfac.navy.mil
	Jose Payne	619.532.0962	jose.payne@navy.mil
<u>.</u>	Laurie Lowman	757.887.4692	lowmanll@raso.navy.mil
	Dick Lowman	757.887.4692	lowmanrw@raso.navy.mil
U.S. Environmental Protection Agency (EPA)	Michael Work	415.972.3024	Work.Michael@epa.gov
Department of Toxic Substances Control	Chein Kao	510.540.	ckao@dtsc.ca.gov
City of San Francisco	Amy Brownell	415.252.3967	amy.brownell@sfdph.org
Lennar/BVHP	Bob Hocker	415.995.1770	robert.hocker@lennar.com
	Jaque Forrest	510.251.2888	jforrest@ch2m.com
***	Sigrida Reinis	415.955.9040	sreinis@treadwellrollo.com
Tetra Tech EM Inc.	Doug Bielskis	415.222.8242	Doug.Bielskis@ttemi.com
Navy Contractor	Julia Vetromile	415.222.8225	Julia.Vetromile@ttemi.com
	Debbie Cheng	415.222.8215	Deborah.Cheng@ttemi.com
•	Victoria Coker	713.520.7667	Victoria.Coker@ttemi.com
	Steve Delhomme	713.520.7667	Stephen.Delhomme@ttemi.com
•••	Arnab Chakrabarti	415.222.8351	Arnab.Chakrabarti@ttemi.com
	James Medley	415.222.8201	James.Medley@ttemi.com
Innovative Technical Solutions, Inc.	Arvind Acharya	925.946.3100	aacharya@itsi.com
Navy Contractor			
Foster Wheeler	Glenn Starr	619.234.8696	gstarr@ttfwi.com
Navy Contractor	Gerry Slattery	415.671.1990	gslattery@ttfwi.com
Shaw Group	Dan Leigh	925.288.2193	daniel.leigh@shawgrp.com
Navy Contractor			
Tech Law, Inc.	Karla Brasaemle	415.281.8730	kbrasaemle@techlawinc.com
EPA Contractor			
ArcEcology	Cian Dawson	415.495.1786	cian_dawson@mindspring.com
Restoration Advisory Board	Barbara Bushnell	415.285.1313	bbush58@yahoo.com

## ATTACHMENT B HUNTERS POINT SHIPYARD BASE REALIGNMENT AND CLOSURE CLEANUP TEAM ACTION ITEMS

Action	Date Identified	Responsible Party	Date Due	Date Accomplished	Notes
Basewide: Follow up on ecological criteria discussions with RWQCB.	23-Sep-03	Keith Forman (Navy) Julie Menack (RWQCB) Tetra Tech	TBD		To be further discussed during scoping meeting for Parcel B tech memo in support of the ROD amendment
Basewide: Distribute an updated Navy RPM contact list and send weekly updates to the BCT on upcoming field work and deliverables.	21-Oct-03	Keith Forman (Navy)	TBD		
Basewide: Distribute a slightly modified HHRA letter and develop a timeframe to address HHRA issues.	21-Oct-03	Keith Forman (Navy) Tetra Tech	23-Oct-03	23-Oct-03	
Parcel B: EPA will check guidance regarding the ARARs discussion in the five-year review report to verify whether ARARs from the 1997 ROD should be "frozen."	23-Sep-03	Michael Work (EPA)	TBD		EPA is still checking guidance
Parcel B: Schedule a scoping meeting and separate storyboard presentation to discuss the technical memorandum in support of the ROD amendment. Compile a list of Parcel B issues requiring resolution.	23-Sep-03	Ryan Ahlersmeyer (Navy) Tetra Tech	TBD		Pending resolution of risk assessment technical issues
Parcel B: Review soil gas ESLs provided by RWQCB. RWQCB will forward guidance on installing soil gas sampling points and on ESLs.	21-Oct-03	Ryan Ahlersmeyer (Navy) Julie Menack (RWQCB) Tetra Tech	TBD	7-Nov-03	Information forwarded by RWQCB on 22-Oct-03. Navy completed review of information and will incorporate into future work, as appropriate.

#### HUNTERS POINT SHIPYARD BASE REALIGNMENT AND CLOSURE CLEANUP TEAM ACTION ITEMS

Action	Date Identified	Responsible Party	Date Due	Date Accomplished	Notes
Parcel B: Verify that open space areas not designated for future terrestrial habitats do not require a formal ecological risk assessment.	21-Oct-03	Ryan Ahlersmeyer (Navy) Tetra Tech	TBD		To be further discussed during scoping meeting for Parcel B tech memo in support of the ROD amendment
Parcel C: Address data needs to support the anaerobic/aerobic treatability study work plan. Update the RU boundary, hydrogeologic information, and references to the Parcel C GDGI.	21-Oct-03	Glenn Christensen (Navy) Shaw Group	TBD		To be addressed in final work plan and associated responses to comments (RTC).
Parcel E: Provide an update of the IR-03 NETTS status at an upcoming BCT meeting.	23-Sep-03	Charles Mazowiecki (Navy) Tetra Tech	TBD		Update planned for December BCT meeting
Parcel E: Address data needs to support the phyto-groundwater extraction treatability study work plan. Provide a summary of soil and groundwater chemistry data in the vicinity.	21-Oct-03	Glenn Christensen (Navy) Shaw Group	TBD		Work plan anticipated for submittal in January 2004 to allow incorporation of relevant characterization data, in particular from the standard data gaps investigation.
Parcel E: Follow up with DTSC regarding VOC modeling summarized in landfill gas characterization report.	21-Oct-03	Charles Mazowiecki (Navy) Chein Kao (DTSC) Tetra Tech	15-Dec-03		Navy continuing to prepare RTCs and will issue with final document by 15-Dec-03.
Groundwater: Distribute a table listing basewide sewer line repairs that were conducted by the caretaker site office.	26-Aug-03	Pat Brooks (Navy) Glenn Christensen (Navy)	TBD		Review and compilation of data from Navy caretaker site office ongoing
Groundwater: Verify that the conclusions of the final Parcel E groundwater summary report are reflected in the groundwater monitoring plan.	23-Sep-03	Glenn Christensen (Navy)	23-Dec-03		To be reflected in draft groundwater monitoring plan

#### **HUNTERS POINT SHIPYARD BASE REALIGNMENT AND CLOSURE CLEANUP TEAM ACTION ITEMS**

Notes:			
ARAR	Applicable or relevant and appropriate requirement	Navy	Department of the Navy
BCT	Base Realignment and Closure Cleanup Team	NETTS	National Environmental Technology Test Sites
City	City of San Francisco	ROD	Record of decision
DTSC	Department of Toxic Substances Control	RPM	Remedial project manager
EPA	Environmental Protection Agency	RU	Remedial unit
ESL	Environmental screening level	RWQCB	Regional Water Quality Control Board
GDGI	Groundwater data gaps investigation	TBD	To be determined
HHRA	Human health risk assessment	Tetra Tech	Tetra Tech EM Inc.
IR	Installation restoration	VOC	Volatile organic compound

## ATTACHMENT C-1: COMPLETED REVIEW PERIODS HUNTERS POINT SHIPYARD DOCUMENT REVIEW MATRIX

						<b>Agency Submittal of Comments</b>				
Item	Parcel	Document Name	Submittal Date	Expected Date for Comments		EPA	DTSC	RWQCB	City	
				<u></u>	EPA requested extensions (original					
		Draft Construction			date was 1/3/2003); RTCs planned for November 2003 pending					
1	В	Summary Report	11/18/2002	4/15/2003	resolution of comments	5/8/2003	4/7/2003	4/4/2003	*	
·		Draft Final Landfill Cap	11710/202	1,10,2000		O/O/LOOC	1,772000	17 172000		
		Removal Action Closeout			Document to be finalized in					
2	E	Report	2/4/2003	4/18/2003	December 2003	3/31/2003	*	4/16/2003		
					Final document planned for					
0	Dagawida	Draft BRAC Business	4/0/0000	E/10/0000	December 2003 pending resolution	E/40/0000	E/07/0000	*		
3	Basewide	Plan	4/2/2003	5/19/2003	of agency comments	5/19/2003	5/27/2003 7/1/2003			
							(Addt			
							comments			
		Draft Landfill Gas			Final report with RTCs planned for		received			
4	E	Characterization Report	5/15/2003	6/30/2003	submittal in December 2003	6/16/2003	7/9/2003)	*	<del>-,-</del>	
		Draft Landfill Lateral			RTCs planned for submittal in					
5	E	Extent Report	5/15/2003	6/30/2003	December 2003	6/20/2003	6/26/2003	6/30/2003		
					Review period extended to 8/12/2003					
					to accommodate community members; draft final document with					
		Draft Community			RTCs submitted on 10/2/2003; (see					
6	Basewide	Involvement Plan	6/6/2003	7/21/2003	"Documents currently under review")	7/17/2003	*	*		
							8/8/2003	,		
					RWQCB requested 31-day extension		(general),			
	_	Draft Phase III GDGI		0 (0 (0 0 0 0	(original date was 7/7/2003); revised	T/00/0000	9/2/03	04440000		
7	<u>E</u>	Parcel E Report	5/21/2003	8/8/2003	report w/ RTCs planned for 10/17/03  Draft final document with RTCs	7/28/2003	(specific)	8/11/2003		
		Draft Five-Year Review			submitted on 9/22/2003 (see					
8	В	Document	7/8/2003	8/22/2003	"Documents currently under review")	8/18/2003	8/22/2003	9/4/2003		
		Draft Workplan for Ferox	- / - /		,				***************************************	
		Injection Treatability								
_		Study at Buildings 123			Final document with RTCs planned					
9	B/C	and 272	7/11/2003	8/25/2003	for December 2003	8/25/2003		n/a		
_10_	R/C/D/E	Request for Drinking	8/11/2003	9/25/2003	For RWQCB review	n/a	n/a	9/19/2003	n/a	

## ATTACHMENT C-1: COMPLETED REVIEW PERIODS HUNTERS POINT SHIPYARD DOCUMENT REVIEW MATRIX

Item		Document Name	Submittal Date	Expected Date for Comments	Notes	Age	Agency Submittal of Comments				
	Parcel					EPA	DTSC	RWQCB	City		
	Ī	Nater Determination									
Notes:											
BRAC	Base Reali	gnment and Closure									
City	City of San	Francisco									
DTSC	Departmen	t of Toxic Substances Control									
EPA	U.S. Enviro	onmental Protection Agency									
GDGI	Groundwat	er data gaps investigation									
n/a	Not applica	lble									
RTC	Responses	to comments									
RWQCB	Regional W	later Quality Control Board									

## ATTACHMENT C-2: ONGOING REVIEW PERIODS HUNTERS POINT SHIPYARD DOCUMENT REVIEW MATRIX

•						Age	ncy Submitt	al of Comm	ents
Item	Parcei	Document Name	Submittal Date	Expected Date for Comments	Notes	EPA	DTSC	RWQCB	City
1	E	Draft Landfill Liquefaction Potential Report	8/1/2003	9/19/2003	RWQCB requested 4-day extension (original date was 9/15/2003); final document with RTCs planned for January 2004 pending receipt of agency comments	8/29/2003		10/2/2003	9/18/2003
2	F	Draft Workplan for Feasibility Study Data Gaps Investigation	8/21/2003	9/8/2003	Expedited review requested to accommodate field work schedule; Final work plan and RTCs submitted on 11/7/2003	9/16/03		9/17/2003	
3	В	Draft April to June 2003 Quarterly Groundwater Monitoring Report	8/22/2003	10/3/2003	RTCs submitted on 11/14/2003	10/8/2003			
4	В	Draft Final Five-Year Review Document	9/22/2003	10/22/2003	Final document with RTCs planned for 12/10/2003	11/3/2003	11/10/2003	10/22/2003	
5	В	Workplan for follow-on SVE Treatability Study	9/26/2003	11/10/2003	RTCs planned for December 2003 pending receipt of agency comments	11/3/03	11/25/2003	11/6/2003	11/10/2003
6	С	Workplan for Sequential Anaerobic/Aerobic Treatability Study at Building 134	10/2/2003	11/17/2003	Final document with RTCs planned for December 2003 pending receipt of agency comments	11/18/03	11/25/2003	11/6/2003	11/18/2003
7	В	Draft Shoreline Data Gaps Technical Memorandum	10/3/2003	11/17/2003	RTCs planned for 12/17/2003 pending receipt of agency comments	11/17/2003	11/25/2003		
8	B/C/D/E	Request for Concurrence on Proposed Criteria and Process for Evaluating Petroleum Hydrocarbons in Soil	10/13/2003	11/21/2003	For RWQCB review/response			11/24/2003	

## ATTACHMENT C-2: ONGOING REVIEW PERIODS HUNTERS POINT SHIPYARD DOCUMENT REVIEW MATRIX

							Agenc	y Submit	tal of Comme	nts
Item	Parcel	Document Name	Submittal Date	Expected Date for Comments	No	otes	EPA	DTSC	RWQCB	City
9	В	Technical Proposal for Revisions to Soil Human Health Risk Assessment Methodology	10/14/2003	TBD	To initiate disc					
10	В	Request for Identification of ARARs (for proposed ROD amendment)	10/21/2003	11/20/2003	To be discuss	ed at				
Notes: ARAR	Applica	ble or relevant and appropriate requir	ement		RWQCB	Regional Water Qu	uality Control Boa	rd		
City DTSC EPA ROD RTC	Departr U.S. Er Record	San Francisco ment of Toxic Substances Control nvironmental Protection Agency of decision nses to comments			SVE TBD	Soil vapor extraction To be determined	on			

## ATTACHMENT C-3: UPCOMING REVIEW PERIODS HUNTERS POINT SHIPYARD DOCUMENT REVIEW MATRIX

Item	Parcel	Document Name	Approximate Submittal Date	Expected Date for Comments Notes
11	В	Draft July to September 2003 Quarterly Groundwater Monitoring Report	11/20/2003	21 days from submittal date Tentative submittal date
2	Е	Workplan for Parcel E IR-02 Removal Action	12/10/2003	45 days from submittal date Tentative submittal date
3	F	Field Summary Report for Supplemental Field Work	12/22/2003	45 days from submittal date Tentative submittal date
4	B/C/D/E	Draft Groundwater Monitoring Plan	12/23/2003	45 days from submittal date Tentative submittal date
5	E	Workplan for Phyto-Groundwater Extraction Treatability Study Work Plan	1/9/2004	45 days from submittal date Tentative submittal date
6	D	Action Memorandum for Time-Critical Removal Action	1/9/2004	30 days from submittal date Tentative submittal date
7	E	Interim Data Analysis Document for Standard Data Gaps Investigation	1/9/2004	45 days from submittal date Tentative submittal date
8	E	Draft Shoreline Characterization Technical Memorandum	1/16/2004	45 days from submittal date Tentative submittal date
9	F	Draft Final Validation Study Report	1/28/2003	30 days from submittal date Tentative submittal date
_10	Basewide	e Draft Final Historical Radiological Assessment, Volume II	1/30/2004	45 days from submittal date Tentative submittal date
11	Е	Draft Landfill Gas Removal Action Closeout Report	1/30/2004	45 days from submittal date Tentative submittal date
12	В	Draft CAP Addendum	2/6/2004	45 days from submittal date Tentative submittal date
13	D	Workplan for Time-Critical Removal Action	2/6/2004	45 days from submittal date Tentative submittal date

Notes:

CAP Corrective Action Plan IR Installation restoration





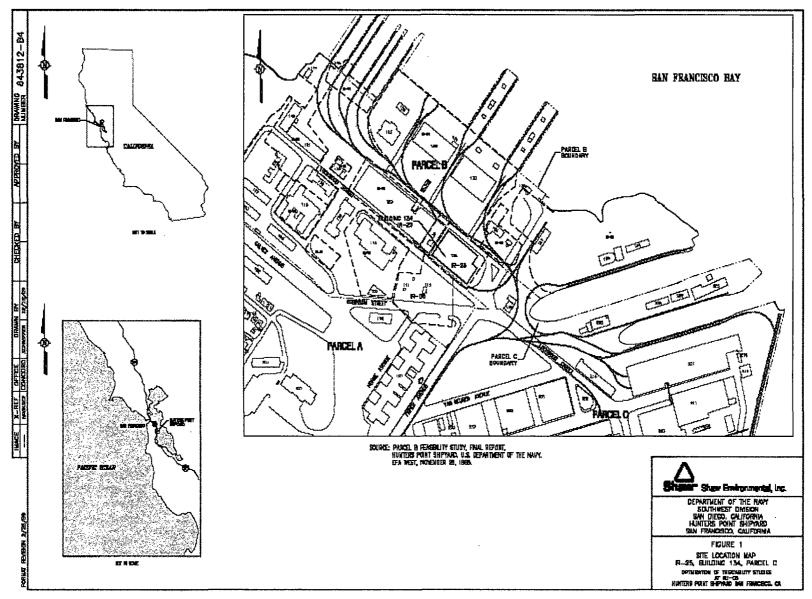
# ANAEROBIC – AEROBIC BIOREMEDIATION TREATABILITY STUDY

Remedial Unit – C5, Building 134 Hunters Point Shipyard



- Navy will perform an In Situ Sequential Anaerobic-Aerobic Bioremediation Treatability Study at Remedial Unit C5, Building 134, Hunters Point Shipyard.
  - Objective of this Treatability Study is to evaluate the degradation of various organic compounds in a sequential anaerobic-aerobic process.
  - Groundwater impacted by volatile and semivolatile organic compounds. Total volatile organic compounds (VOCs) present up to 124 mg/L in the treatability study area.
  - Majority (99.5 percent) of the VOCs in groundwater consist of chloroethenes PCE,
     TCE, DCE, VC and monochloroethane.
  - This same process was successfully applied at Point Mugu, and is presently being applied at Treasure Island.







• This project involves multiple tasks defined in two draft work plans submitted September 30, 2003.

#### Treatability Study Support Work Plan

- In Support of In Situ Sequential Anaerobic-Aerobic Bioremediation Treatability Study Remedial Unit C5, Building 134, Hunters Point Shipyard.

#### Treatability Study Operation, Testing and Evaluation Work Plan

 In Situ Sequential Anaerobic-Aerobic Bioremediation Treatability Study Remedial Unit C5, Building 134, Hunters Point Shipyard.

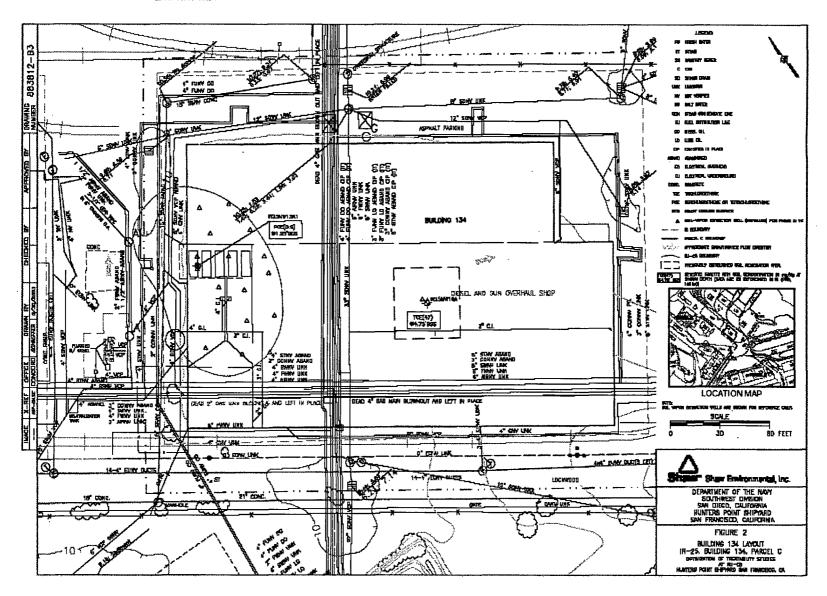


- Preliminary work associated w/the treatability study is outlined in a Workplan entitled: In Support of In Situ Sequential Anaerobic-Aerobic Bioremediation Treatability Study Remedial Unit C5, Building 134, Hunters Point Shipyard.
  - Decommissioning 15 monitoring wells with potential to act as preferential pathways for vertical contaminant migration and those within the degreaser pit /separator area scheduled for excavation (Task 5). Five wells are planned for installation.

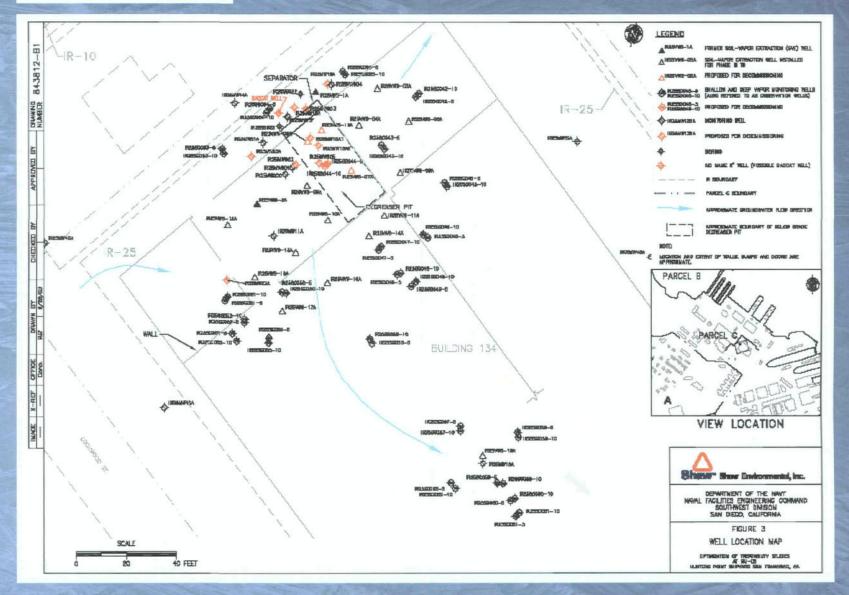
#### Five wells to be installed include:

- One injection well located inside degreaser pit.
- One extraction well located within the backfill of the separator excavation.
- Three monitoring wells (two located within the degreaser pit, one located in the vicinity of boring IR25SB922.
- A degreaser pit (inside of Building 134) and separator (outside Building 134) will be excavated and disposed of.
- Perform building structural evaluation as-needed, site safety and disposal of all generated waste.

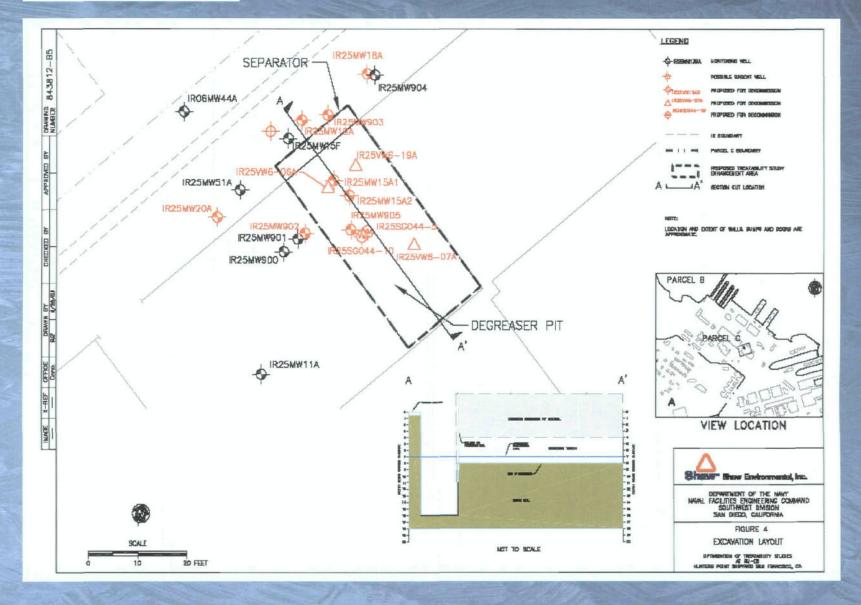




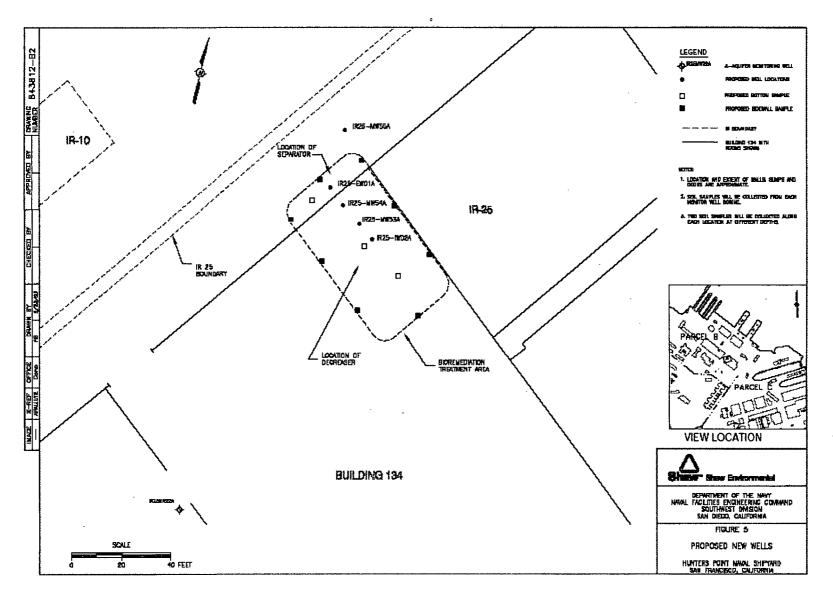




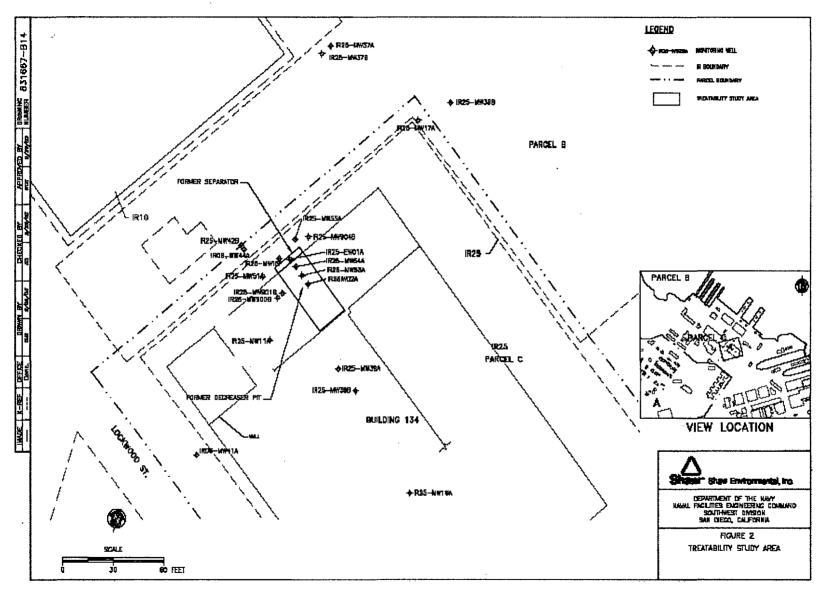




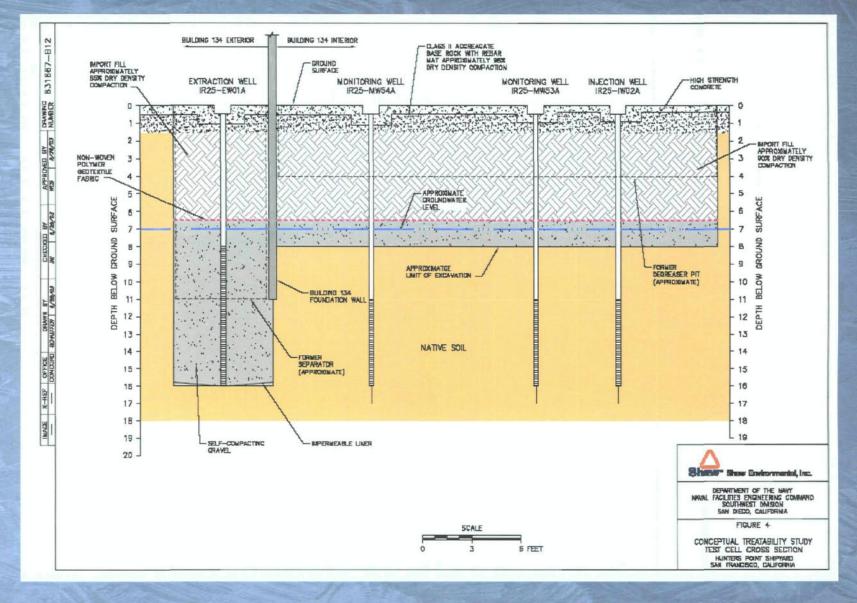














# SEQUENTIAL ANAEROBIC/AEROBIC TREATABILITY STUDY PRELIMINARY TREATMENT ZONE CHARACTERIZATION

#### Baseline groundwater sampling and analyses

- Location 4 treatment zone wells + 15 perimeter monitor
- Frequency Prior to each Stage and at completion of project
- Parameters VOCs, SVOCs, PCBs and dissolved metals, DHC

#### Baseline Soil sampling and analyses

- Location Borings for treatment zone wells @ 10 & 15 feet bgs
- Frequency Prior to each Stage and at completion of project.
- Parameters VOCs, SVOCs, PCBs, TPH-extractable and Total Metals, DHC.



### STAGE 1 – ANAEROBIC BIOREMEDIATION

- Extract groundwater from downgradient extraction well.
- Amend with sodium lactate and sodium bromide.
  - Sodium lactate is a food grade, easily fermentable carbon source.
  - Sodium bromide is a non-toxic conservative tracer.
- Inject treated groundwater in upgradient injection well.
- Continue until sodium lactate is distributed throughout treatment zone
  - -(estimated 10 to 30 days depending on site conditions)
- Discontinue circulation.
- Monitor anaerobic degradation of contaminants

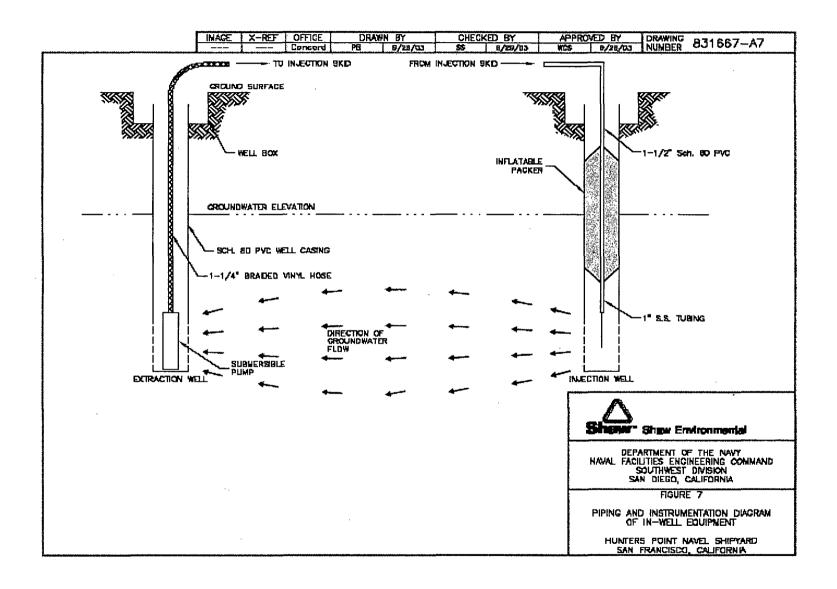


### STAGE 1 – ANAEROBIC BIOREMEDIATION (cont).

### PERFORMANCE MONITORING

- Samples collected from wells in treatability study area
- Samples analyzed for PCBs, VOCs, SVOCs, Bromide
- Samples collected weekly for one month and biweekly for 5 months







### STAGE 2 – AEROBIC BIODEGRADATION

Phase 1 – Aerobic respiration direct oxidation of contaminants by addition of oxygen

Phase 2 – Aerobic cometabolism
Indirect oxidation of contaminants by addition of oxygen and methane

• Stage 2 - Phase 1 - Groundwater extracted, amended with oxygen gas and minor amounts of sodium nitrate (for protein synthesis), injected into treatment zone

Performance measured in treatment zone monitor wells (VOCs, SVOCs)

Stage 2 - Phase 2 - Groundwater extracted, alternately amended with oxygen and low concentrations of methane.

•Performance measured in treatment zone monitor wells (VOCs, SVOCs, methane)



 Evaluate field and laboratory data and prepare a summary report describing the supplementary site characterization and treatability study results to support the full-scale implementation of anaerobicaerobic treatment.



### PHYTOREMEDIATION PILOT TEST FOR GROUNDWATER CONTROL IR SITE 01/21

**Hunters Point Shipyard** 

#### PROPOSED PHYTOREMEDIATION AT IR 01/21 PARCEL E

- •Site located at the southwestern side of landfill in Parcel E.
- •Initial removal action conducted to prevent migration of PCBs in groundwater to San Francisco Bay
- •Initial removal action included the installation of a groundwater control system consisting of a sheet pile wall and groundwater extraction wells 1998 to 1999
- •Modeling was performed to assess the effectiveness of the groundwater control system
- •Because of the limited effectiveness of the groundwater control system, a recommendation was made to evaluate more passive groundwater control measure

#### Hydrogeology

- Shallow Thin A-aquifer
  - 2 to 5 feet thick
  - Fill material: clay, sand, silt gravel
  - Low to moderate hydraulic conductivity
- Laterally Continuous Aquitard
   Pleistocene Bay Mud sediments
   Very low hydraulic conductivity
- B-aquifer
  - Pleistocene sand
  - Moderate hydraulic conductivity
  - -Semi-confined

#### Groundwater

- A-aquifer groundwater contains low concentrations of VOCs and PCBs, as well as ammonia and cyanide (organic waste breakdown products).
- Brackish groundwater quality

#### **EXISTING GROUNDWATER EXTRACTION SYSTEM**

#### **Purpose**

Prevent Migration of PCBs in groundwater into SF Bay

#### **Sheet Pile Wall**

Groundwater barrier

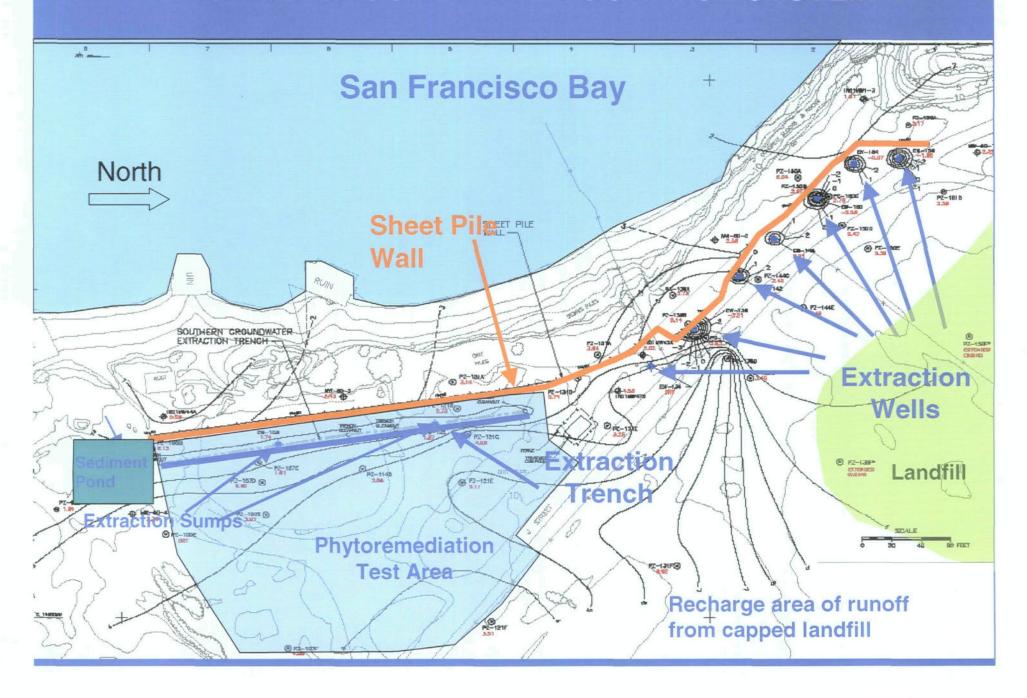
- Approximately 600 feet Long
- Installed 15 to 50 Feet Below Land Surface

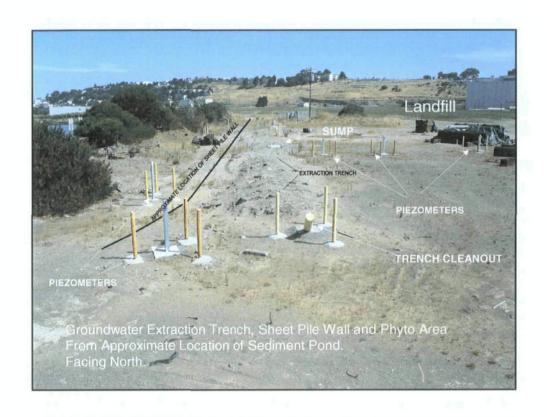
#### **Groundwater Extraction System (GES)**

Prevents groundwater mounding behind sheet pile wall

- 7 Extraction Wells
- 1 Extraction Trench (including 2 sumps)
- Individual Flow Rates: 0.1 to 9 gallons per minute (gpm)
- Total Flow Rate Approximately 6 to 9 gpm
- Radius of Influence Less Than 15 Feet around extraction wells
- · Almost all flow comes out of one well
- Untreated water discharged to POTW

### EXISTING GROUNDWATER CONTROL SYSTEM







#### **QUALITY OF TREES EVALUATED**

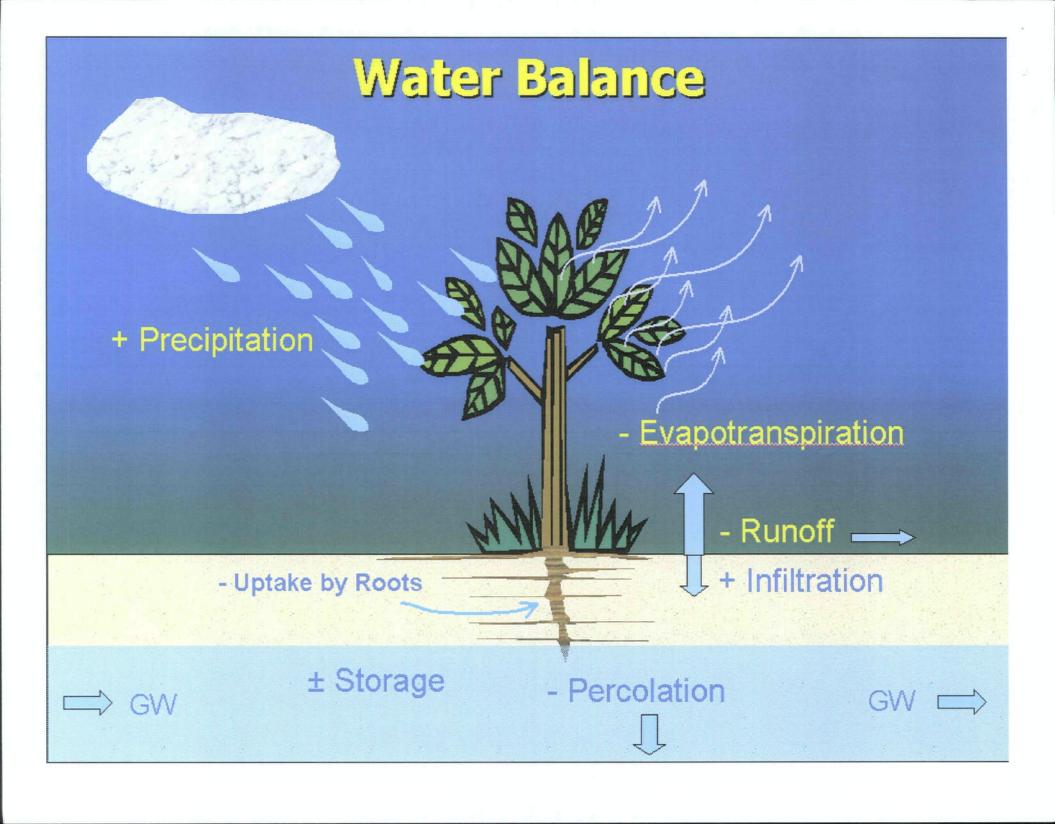
- Salt Tolerance Able to survive slightly brackish water
- Daily Water Uptake high groundwater uptake preferred
- Growth Rate high growth rate preferred
- Planting Density high planting density preferred
- Area of Water Extraction large area of extraction preferred
- Root Depth must reach groundwater (5 to 10 feet)

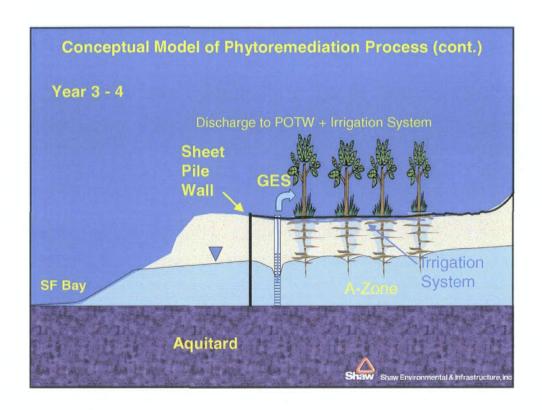
#### **Trees Selected:**

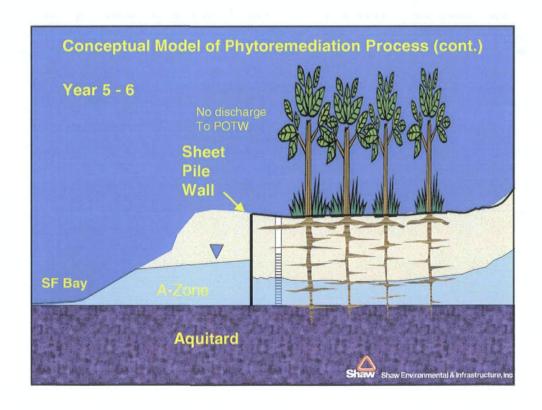
- Freemont Cottonwood
- Eucalyptus
- Red Willow
- Yellow Willow

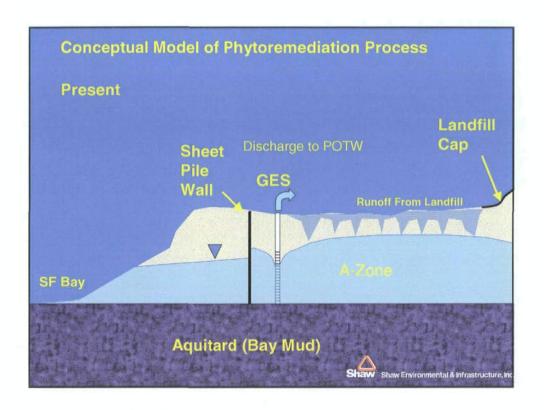
#### Description of evaluation criteria

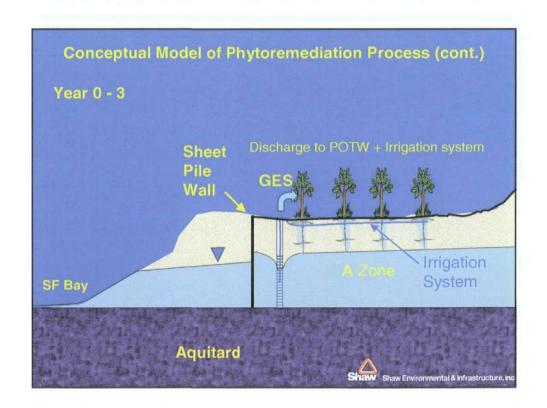
Scientific Name	Eucalyptus	Tamarix	Populus Poplar, Cottonwood	
Common Name	Eucalyptus	Tamarisk, Saltcedar		
Growth Form •	Tree	Shrub/Tree	Tree	
Salt Tolerance	Very High (1200-15000 ppm)	Very High (6000-15000 ppm)	Moderate-High (3600 ppm)	
Water Uptake	20-150 L/day	50-700 L/day	30-150 L/day	
Growth Rate	Rapid (3-12 ft/yr)	Rapid (up to 10-12 ft)	Rapid (4-10 ft/yr)	
Planting Density	200-1200/acre	800-1200/acre	600-1000/acre	
Area of Water Extraction (extent of roots)	15-40 ft diameter	5-12 ft diameter	10-30 ft diameter	
Root Depth	2-20 ft	3-9 ft or more	3-12 ft	
Leaf Retention	Evergreen	Deciduous	Deciduous	

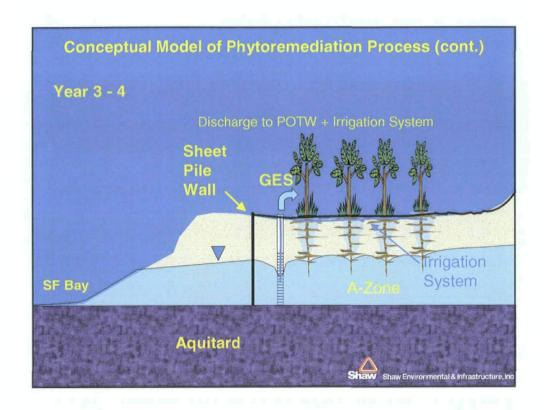


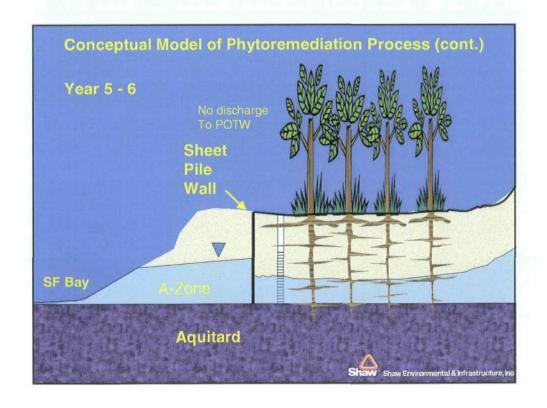












#### **CONCLUSIONS:**

- Number of trees required largely controlled by hydraulic conductivity and evapotranspiration
- Capping recharge area reduces mounding
- Theoretical groundwater uptake by trees is sufficient to control groundwater flow at landfill
- Phytoremediation may be an effective alternative to achieve groundwater control

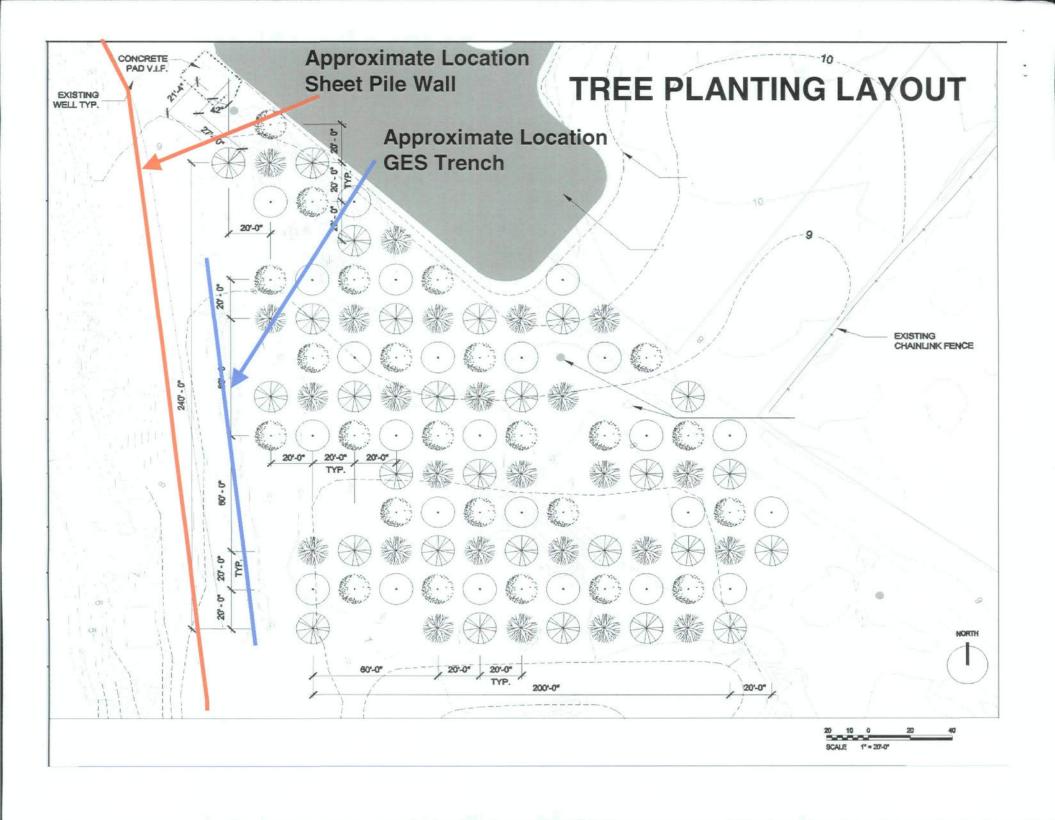
#### PHYTOREMEDIATION PILOT TEST:

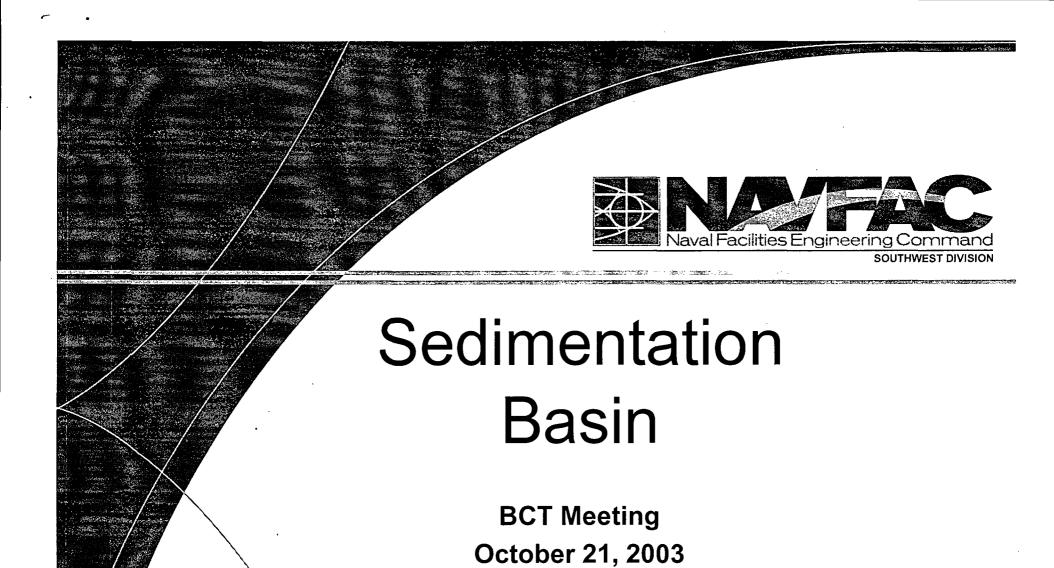
Phase 1 – Tree Planting and Evaluation - Year 1 to 3

- Plant 100 trees
- 4 species of trees
- Irrigate with site groundwater
- Evaluate tree growth/mortality

Phase 2 - Groundwater Uptake - Year 3 to 5

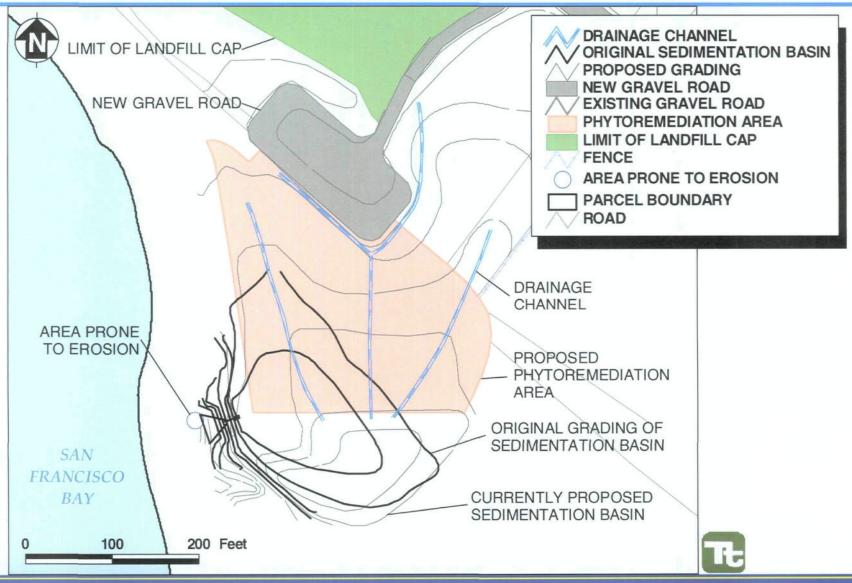
- Replant most appropriate trees
- Evaluate groundwater drawdown
- Turn off GES





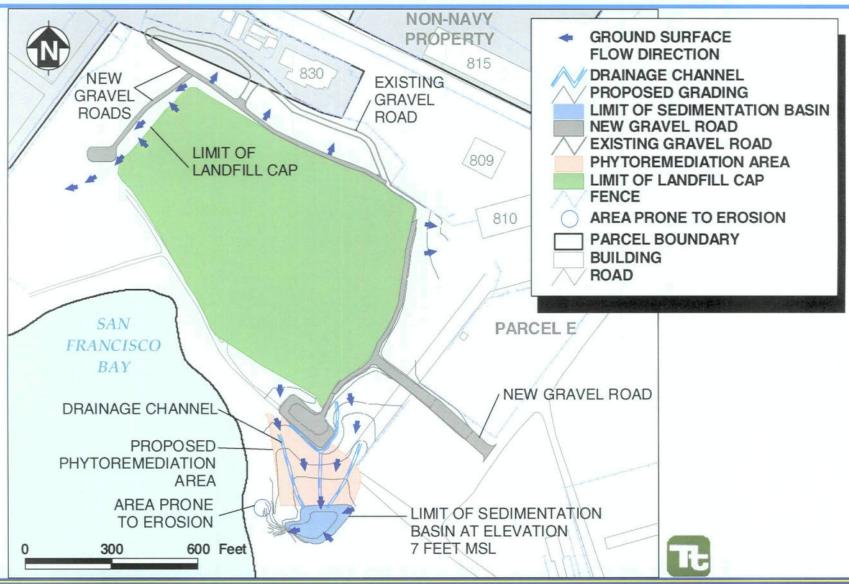
# **Original Sedimentation Basin**





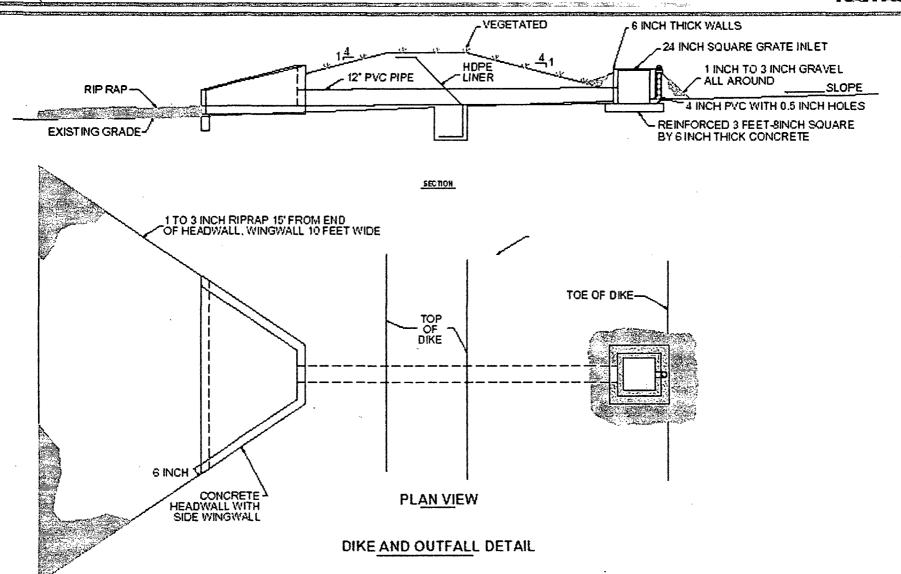
# **Proposed Sedimentation Basin**





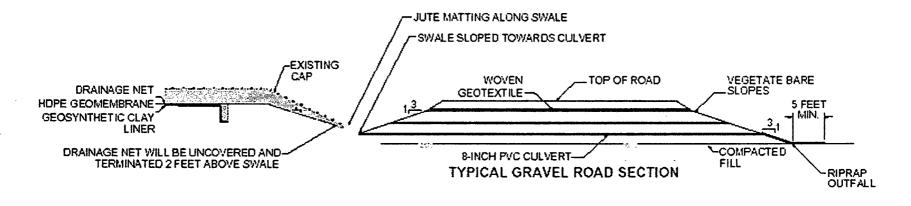
# **Sedimentation Basin Design Details**

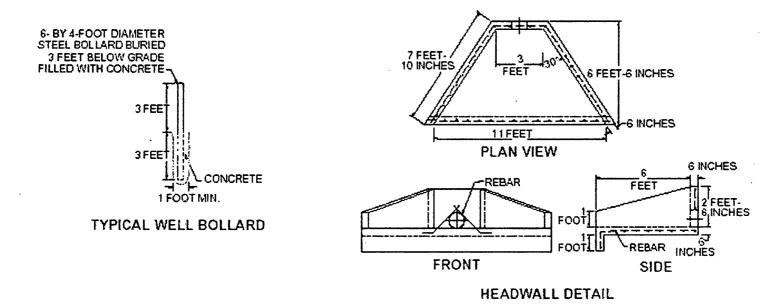




# Sedimentation Basin Design Details (cont'd)







## **Status of Sedimentation Basin Construction**



- Construction began on September 30, 2003
- Completion of construction expected by end of November
- Encountered sandblast grit during site grading
  - Collected soil samples for chemical analysis
  - Will conduct radiological screening and collect samples for radiological analysis
- Site grading on hold pending soil analytical results
- New gravel roads are presently being constructed

# **Soil Samples Collected for Chemical Analysis**

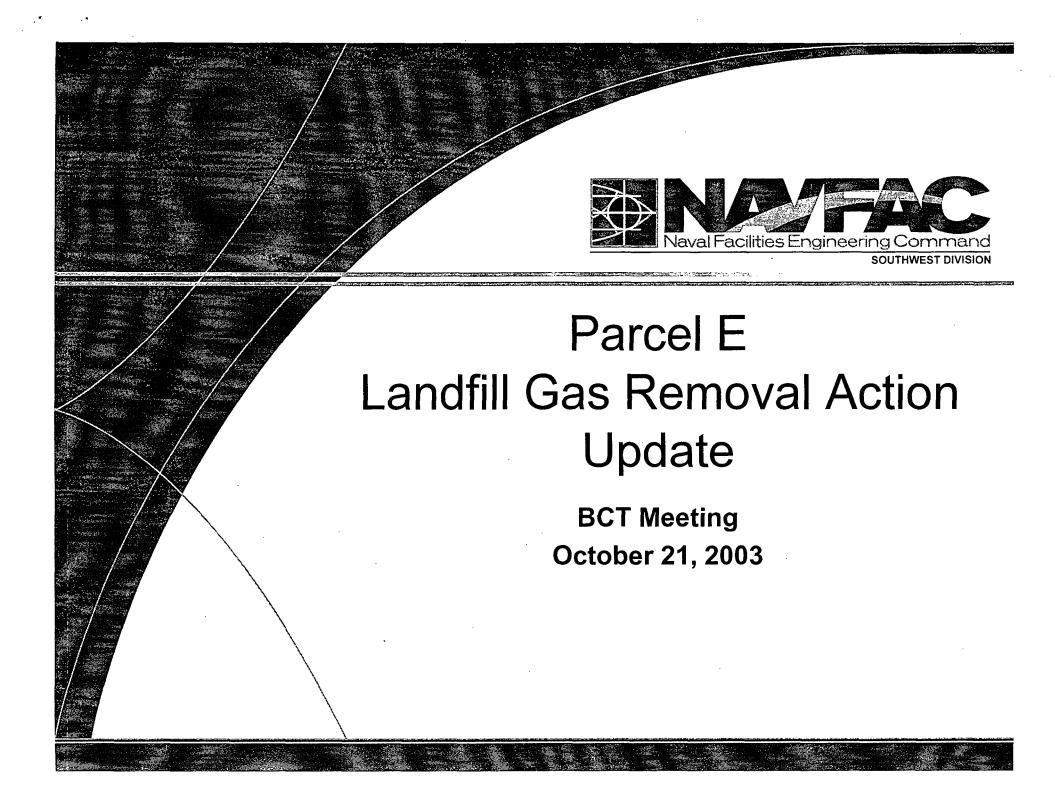


 4-point composite samples were collected from 0 to 6 inches at elevation 6 mean sea level (base of sedimentation basin)

#### Analytical Results of Soil Samples from Sedimentation Basin

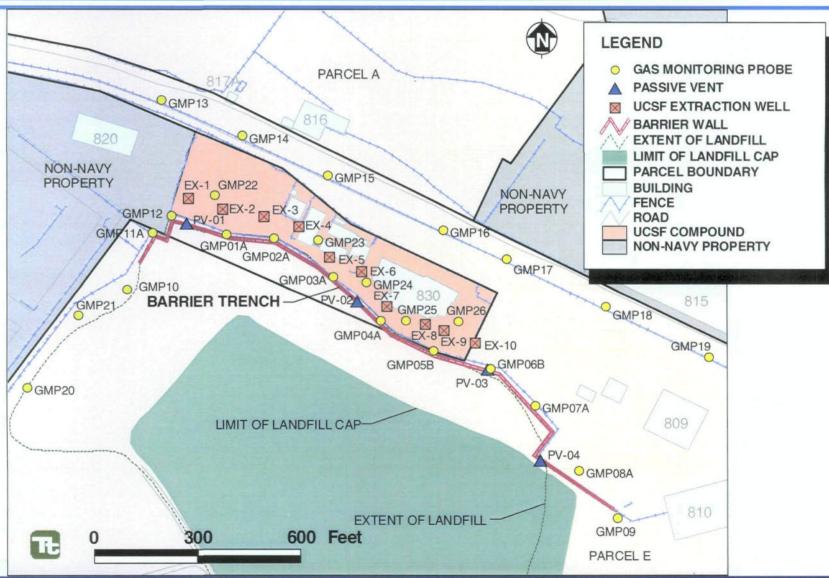
Sample ID	TPH-gas mg/kg	TPH-diesel mg/kg	Benzene ug/kg	Toluene ug/kg	Ethylbenzene ug/kg	Total Xylenes ug/kg	PCBs mg/kg	Lead mg/kg
SB-South	56	7,300	<25	<25	100	223	1.3	170
SB-North	1.2	490	<4.95	<4.9	<4.9	<9.8	0.84	79

Notes
mg/kg Milligram per kilogram
PCB Polychlorinated biphenyls
TPH Total petroleum hydrocarbons
ug/kg Microgram per kilogram



# **Landfill Gas Control System**

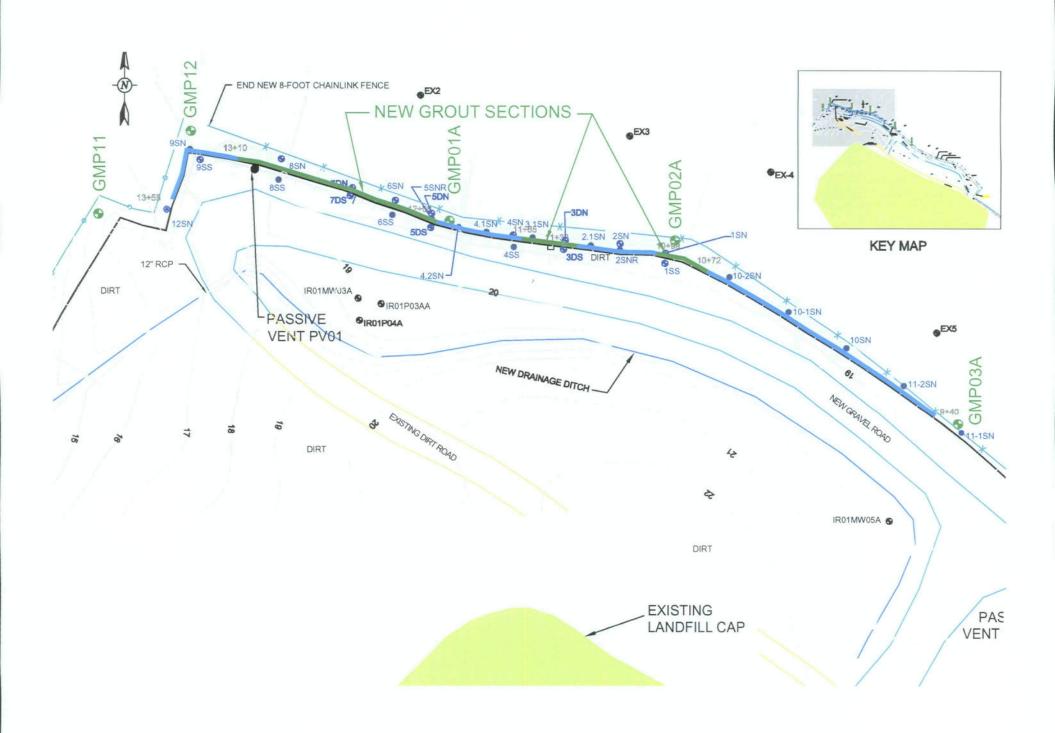




# **Landfill Gas Control System Update**



- Completed grouting at western end of the barrier wall on October 17<sup>th</sup>
- Continue monitoring UCSF and fence line GMPs to ensure methane remains below cleanup goals



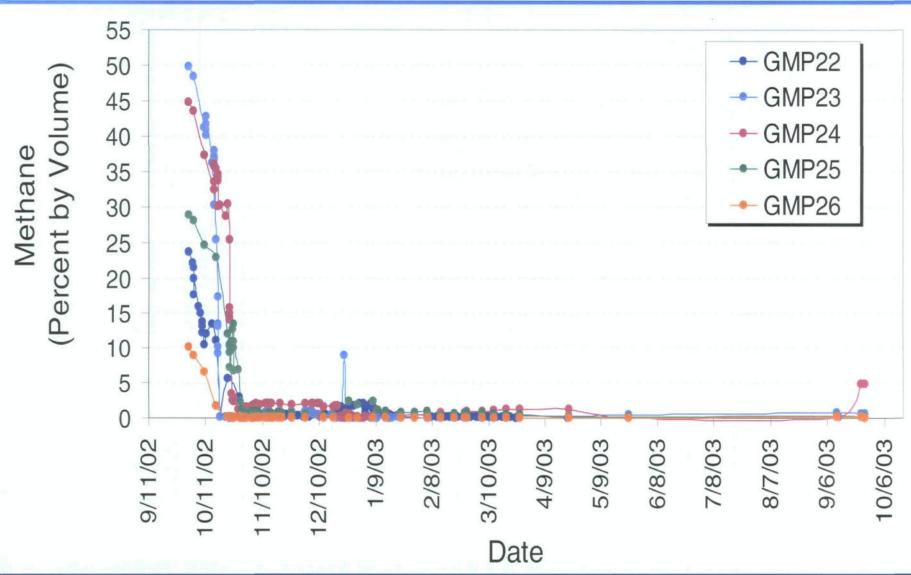
# **Landfill Gas Monitoring Update**



- Methane detected at GMP24 (directly west of UCSF building 830)
- GMP24 methane level 0.2% on September 12<sup>th</sup>, detected at 4.9% on September 26<sup>th</sup>
- Methane levels at UCSF GMPs, fence line GMPs, and extraction wells remain well below action level (5%)
- Methane has not risen in GMP24 in three weeks since detection
- Methane level at GMP24 is 0.7 percent by volume (October 20<sup>th</sup>)

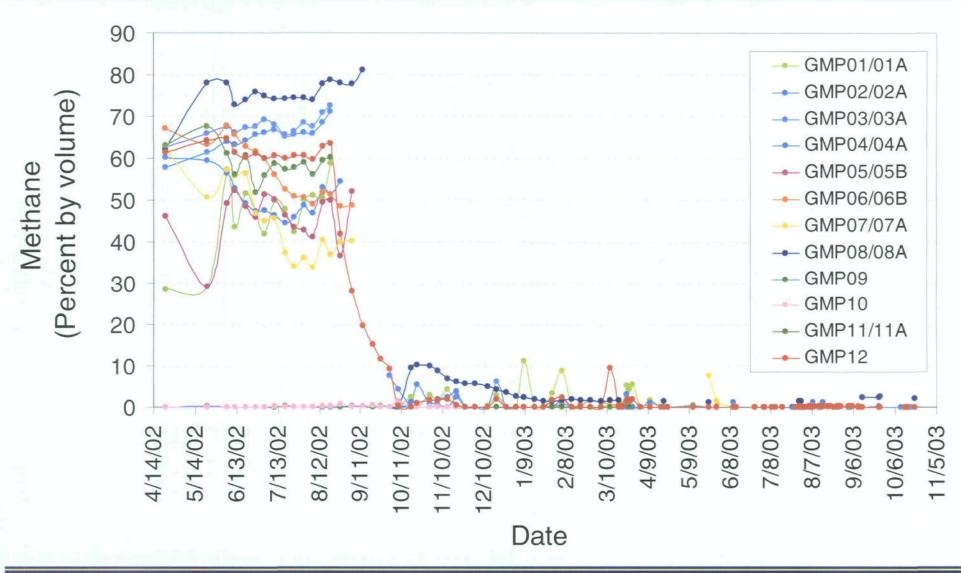
## **Methane Level At UCSF GMPs**





# **Methane Level At Fence Line GMPs**





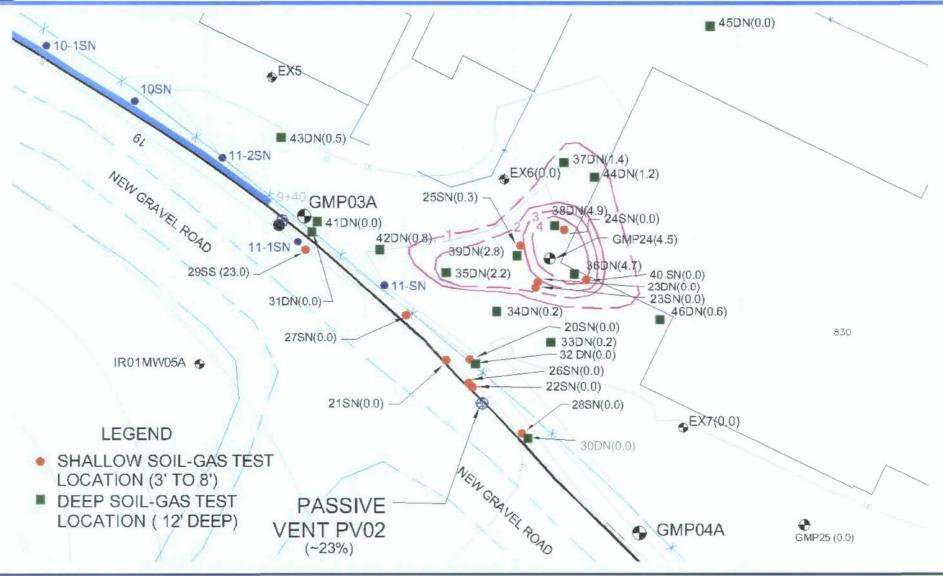
# Response to Methane Detected at GMP24



- Initiated extraction at PV-02 on landfill side of wall immediately; no apparent effect noticed at GMP24 after four days
- Installed 28 temporary probes (between 3 to 12 feet deep) around GMP24 to evaluate extent of elevated methane
- Present data show an isolated pocket of methane around GMP24, 10 to 12 feet deep

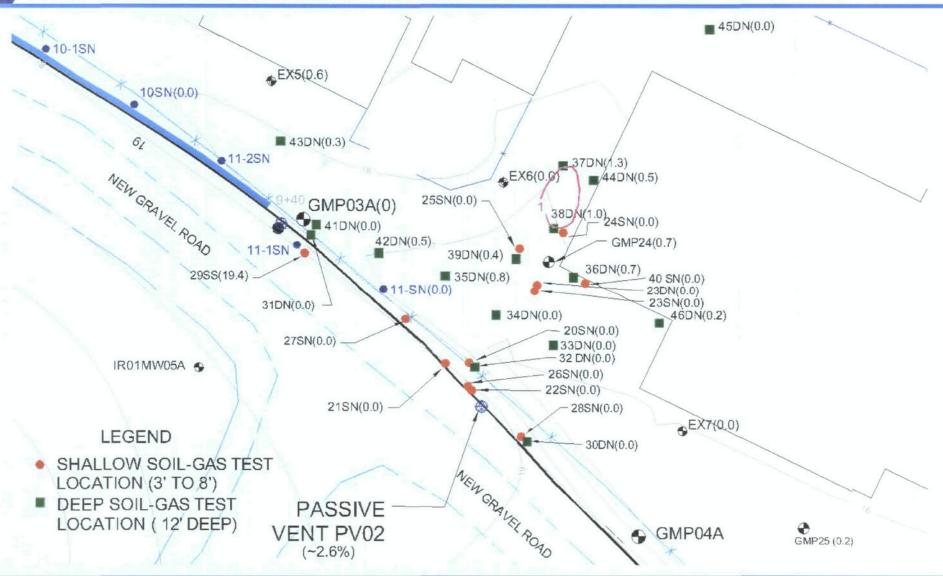
# Methane Before Extraction at GMP24





## **Methane After Extraction at GMP24**





# Response to Methane Detected at GMP24 (cont'd)



- Initiated extraction at GMP24 on October 17<sup>th</sup> at 10 cubic feet per minute
- Measured pressure response and methane concentration at nearby probes and GMPs
- · Methane rapidly decreased within 6 hours
- · Source is being evaluated

### **Next Steps**



- Continue monitoring at all fence line and UCSF GMPs and temporary probes around GMP24
- Complete interviews with landfill gas contractors
- Evaluate additional removal action to control landfill gas
- Prepare Action Memo and Removal Action Work Plan
- Prepare Landfill Gas Monitoring Plan

### **GMP Monitoring Plan**



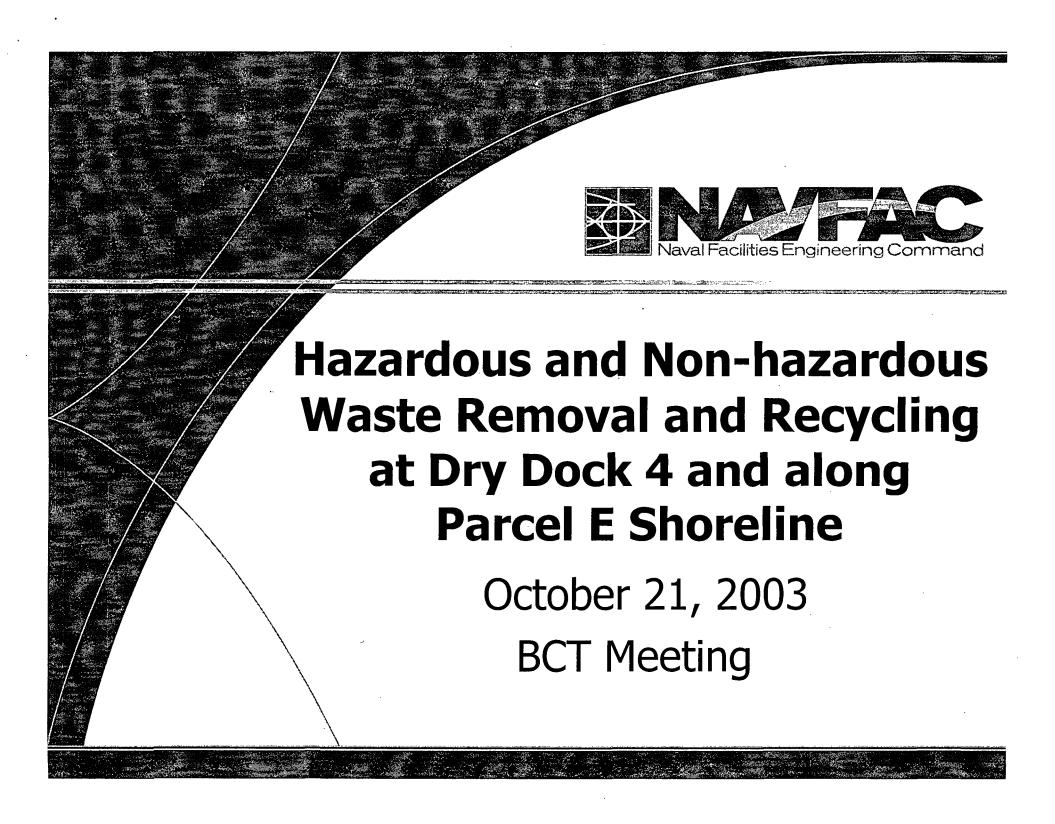
- · Landfill Gas Monitoring Plan to include:
  - Interim landfill gas monitoring program
  - Operation and maintenance procedures
  - Contingency plan to address any potential problems (rebound, etc.)
- Tentative schedule
  - February 1, 2004 

    Draft plan to agencies
  - December 2003 ⇒ New GMP installation on Crisp
     Avenue per plan and interim monitoring

### **GMP Monitoring Plan**



- Initially, monthly reports will be issued summarizing gas monitoring data
- Data will continue to be posted on Navy website



## **Purpose**



- Remove hazardous and non-hazardous wastes from Dry Dock #4 and Parcel E shoreline areas.
- Remove non-hazardous surface debris and recyclable materials so that both sites are left visually clean.
- Recycle scrap metal.
- Dispose of non-recyclable wastes and debris.

## **Statement of Work**



### Dry Dock #4:

- Collect, characterize and dispose of hazardous waste and non-hazardous debris.
- Consolidate scattered keel blocks to existing stockpile.
- Demolish and dispose of Building 372 and other sheds that are not included in the base-wide real estate listing.
- Characterize and dispose of four PCB-containing circuit breakers.
- Sample characterize and dispose of one high-voltage transformer.
- Remove and recycle ropes in Building 368A and demolish and dispose of the building.

## **Statement of Work**

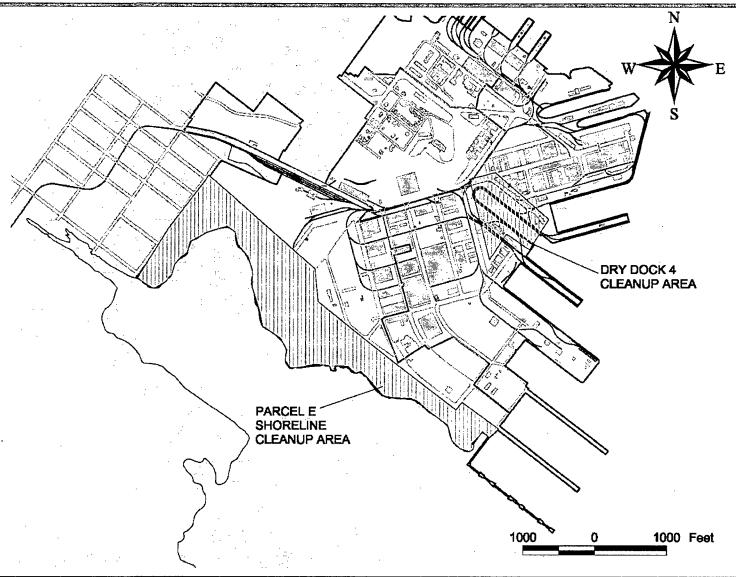


### Parcel E Shoreline:

- Collect, characterize and dispose of all non-hazardous debris.
- Consolidate scattered keel blocks to existing stockpile.
- Remove and dispose of pallets and a burned out building adjacent to the landfill entrance.

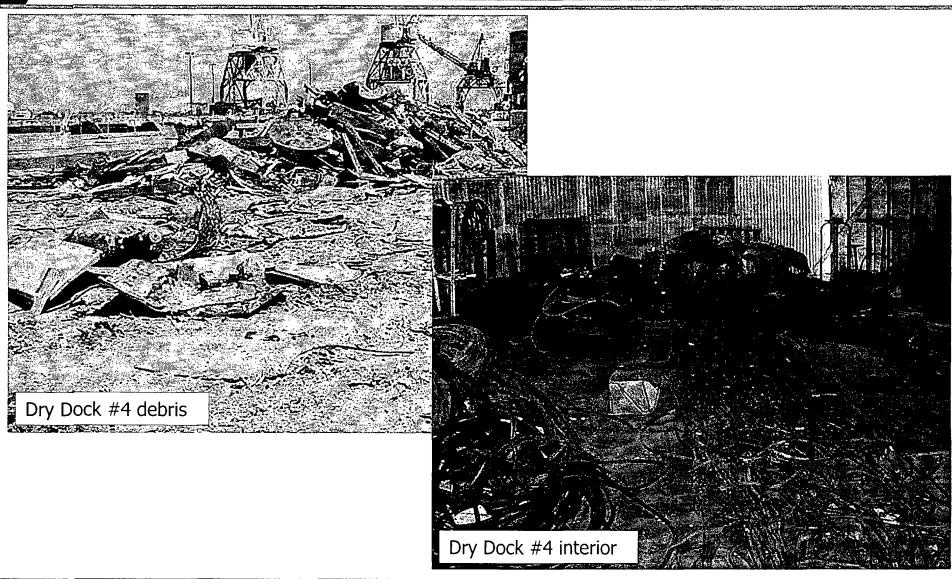
# **Cleanup Area Locations at HPS**





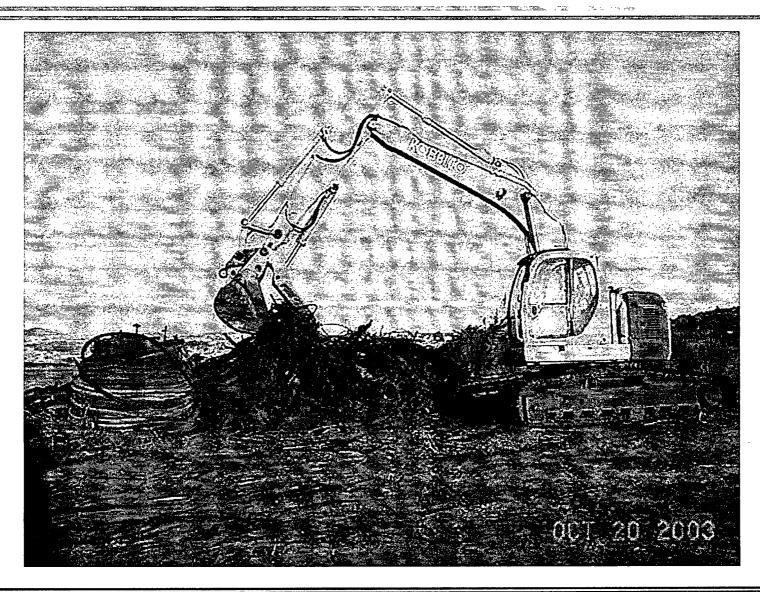
## Dry Dock #4 - Before





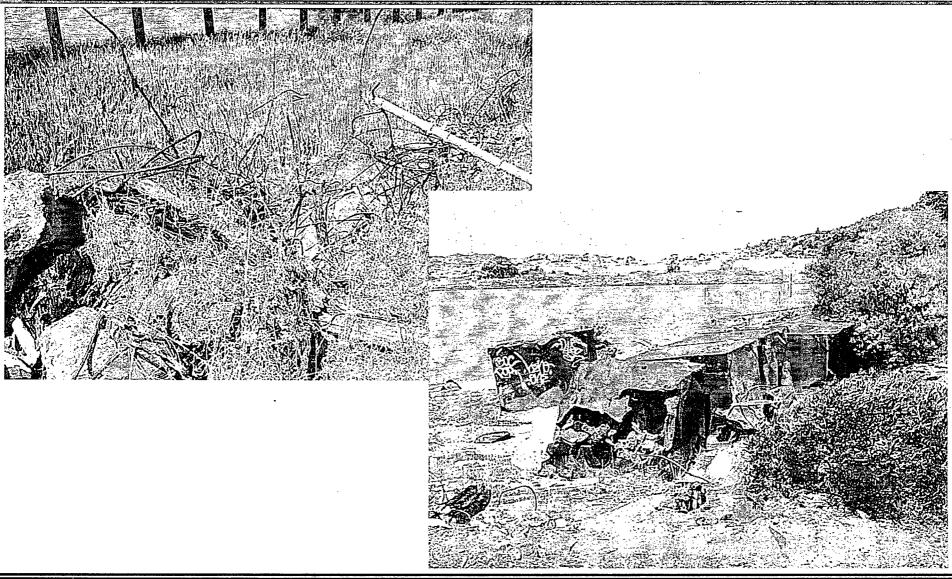
## **Dry Dock #4 - Progress**





# **Parcel E Shoreline - Before**





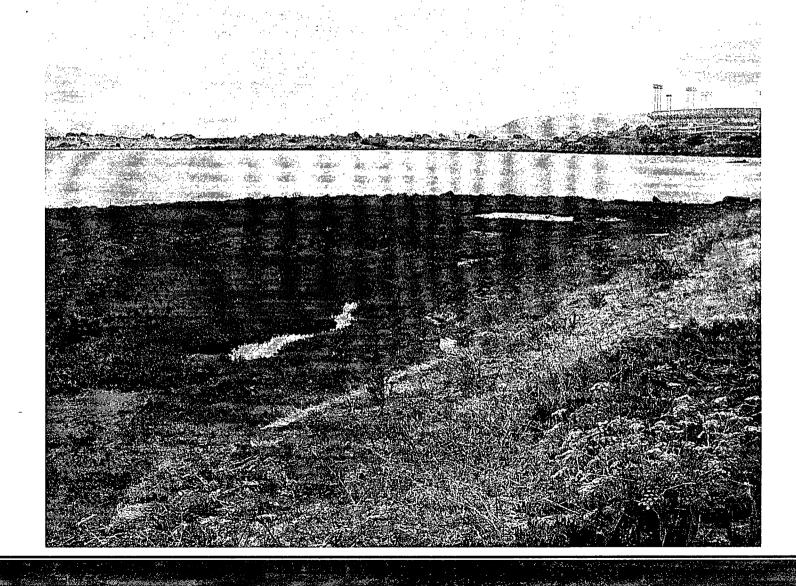
# **Parcel E Shoreline - Progress**





# **Parcel E Shore line - After**





# **Estimated Waste and Debris Quantities**



## Quantities of waste and/or recyclables:

- 22 trucks of hazardous materials:
  - 1 transformer
  - 4 oil-filled circuit breakers
  - 311 miscellaneous containers of hazardous materials (aerosol containers, 55 gallon drums containing oils, solvents, paints, lubricants etc)
  - 180 compressed gas cylinders
  - 1 drum asbestos materials
  - Sandblast grit

Liquid hazardous waste volume (estimated):

- 210 gallons

# **Estimated Waste and Debris Quantities**



## Quantities of waste and/or recyclables, continued:

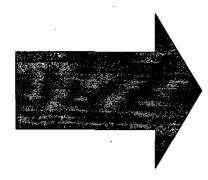
- 20 trucks of non-hazardous materials:
  - Wood debris
  - Ropes
  - Trailers, boats
  - Building material / burned Bldg. 702
  - Pallets
  - Scrap metal

Total liquid non-hazardous waste volume (estimated):

- 80 gallons of recyclable oils and lubricants
- 245 tons of recyclable steel solicit local firms only

## **Post Construction Report**





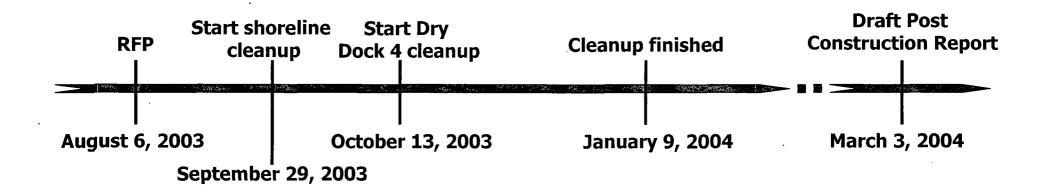
March 3, 2003;

**Draft Post Construction Report:** 

- Decontaminate process equipment, conduct waste consolidation and provide asbestos services in Parcels B, C, D and E.

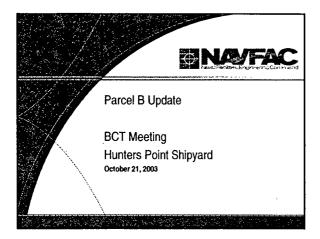
## **Timeline**











#### **Key Issues for Scoping Tech Memo**



- •Parcel B Boundary: IR-06
- •Western Boundary at IR-07/18
- •SVE and ZVI Treatability Studies
- •Parcel B/F Interface
- •Ecological Risk Evaluation
- •Wetlands
- •IR-07/18 Debris Fill Conditions
- •Open Space
- •Soil Characterization for Risk Assessment

#### Parcel B Boundary with other Parcels



- •Parcel Boundaries have changed since the ROD
  - -IR-06 added to Parcel C from Parcel B in 2002 -IR-18 excavation extended into Parcel A
- •Boundaries are administrative, not formalized until legal description presented in deed
- •IR-06 will be addressed in the Parcel C FS and ROD
- Parcel B Tech Memo in Support of the ROD Amendment (TMSRA) will further document the boundary change

#### Western Boundary at IR-07/18



- •Parcel B adjacent to private property on the west
- •Concentrations exceeding ESD 2000 goals have been detected at the western fenceline
- •Parcel B TMSRA will only address onsite locations.

#### **Treatability Studies**



- •Results of the treatability studies at IR-10 will be reviewed and the technologies evaluated as remedial alternatives in the TMSRA
  - -Soil-vapor extraction (SVE) to treat VOCs in soil
  - -Zero-valent iron injection (ZVI) to treat VOCs in groundwater
- Additional alternatives that may be considered in the TMSRA:
  - -Institutional control to require a vapor barrier to limit VOC intrusion into indoor air
  - -Alternative groundwater and soil treatment technologies

#### Parcel B/F Interface



- •Shoreline areas will be addressed as Parcel B
- •Shoreline data indicates need to assess potential offshore contamination via surface runoff or wave action
- •TMSRA will consider alternatives to address the potential for contamination of Parcel F

#### **Ecological Risk Evaluation**



- •Habitat for terrestrial receptors is not present
  - -Ecological risk was evaluated in the Parcel B RI
  - -Shoreline and other open areas do not provide a suitable habitat for mammals or birds (ERA Phase 1A, 1994)
  - -No further terrestrial ecological assessment planned for TMSRA
- •TMSRA will evaluate impact of potential soil transfer to the bay
  - -Screening level evaluation will compare existing shoreline soil data with ambient levels and ER-Ms
- •Coordination with NAVFAC Ecological Risk Technical Assistance Team

#### Wetlands



- •Reuse plan includes wetlands in Parcel B (IR-07)
- •City has not confirmed type or location of wetlands at Parcel B
- •TMSRA can not address wetlands in Parcel B that are not confirmed

#### IR-07/18 Subsurface Conditions



- Conceptual model will be modified to reflect conditions encountered during remedial action
- Options will be evaluated in the TMSRA to address debris fill at IR07/18
- Additional options to be considered in the TMSRA include institutional controls to ensure protectiveness

#### **Open Space Criteria**



- Navy has proposed revised criteria and methodology for HHRA in open space areas
- •Exposure factors and other parameters developed based on similar HHRAs for Alameda Point (Site 14 and 15 RI, other OUs)
- •HHRA will consider soil to a depth of 2 feet in areas designated for reuse as open space
- . Child and adult receptors will be considered

#### Soil Characterization for Risk Assessment

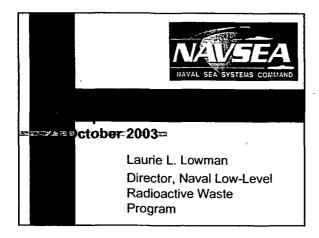


- TMSRA will include the following considerations, as outlined in the recent letter to the BCT:
- •Risk Characterization discussion will address
  - -Risk due to the HPAL for areas without data
  - -Risk associated with dropped COPCs at their cleanup goal
- •Elevated reporting limits have been addressed during remedial action:
  - -Resampling of PAHs
  - -Use of EPA methods with extra procedures (silica gel cleanup) to reduce reporting limits to the maximum practical extent
- ·Risk due to backfill will not be estimated or included

#### **Path Forward**



- •Evaluate BCT responses to Navy HHRA proposal
  - -Data sufficiency issues
  - -Open space criteria
- Estimate risk from ambient metals and evaluate responses
- State responds to the request for ARARs
- Scoping and storyboard meetings for the TMSRA upon resolution of HHRA issues
- Preparation and review of the TMSRA
- •Development and review of the Proposed Plan
- •Development and review of the ROD Amendment





#### **HRA Status Report**

- Additional archives have been researched
- A second draft is being finalized for internal DoD review
- Interview process has been concluded
- New schedule

10/21/200

HPS

NAVSEA

#### **Additional Records**

- Naval Sea Systems Command Archives
  - Reviewed July 2003
  - Information on Triple A contracts
- NAAV Records
  - Reviewed August 2003
  - Little pertinent to HRA
- Defense Threat Reduction Agency (DTRA) Archives
  - Reviewed October 2003
  - Small quantity of new information on HPS

10/21/200

HPS



#### **Second Internal DoD Review**

- Significant comments made on first draft
- Extensive changes made to document
- New information incorporated
- DoD review because DTRA and ACE will be included in review process

10/21/2003

HP



#### **Personnel Interview**

- Interview process concluded
- Information has been summarized as an Appendix to HRA
- Final contacts being made with in-depth interviewees to approve inclusion of the information they provided in HRA
- Some interviewees reluctant to document verbal commentary

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#### **New HRA Timeline**

- Original August distribution delayed for multiple reasons:
  - Additional archive reviews
    - · Conduct research
    - Incorporate additional information
  - Hurricane Isabel
    - · Storm preparation
    - Power outage
  - Holiday weeks

10-21/200

HPS

Rad at HPS



#### **New HRA Timeline (Cont.)**

- November 2003 Distribute internal draft for DoD review
- December 2003 Comments due to HRA Team
- Early 2004 Distribute Draft Final HRA to regulators and public

10/21/2003

HPS



#### **Upcoming Site Projects**

- Building 366
- Parcel E
  - IR-02 Northwest and Central
  - Sedimentation Basin
  - Shoreline Survey Follow-up

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#### **Building 366**

- Subject of HRA Fact Sheet No. 3
- Work will require relocation of artists currently in building
  - Because of the extent of remediation and inconveniences
- Minimal contamination found
- Artists concerns being addressed

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#### **Building 366 Contamination**

- Cs-137 and Ra-226 Outdoor Release Limits (including background)
  - Cs-137 0.13 pCi/g, Ra-226 2.0 pCi/g
- Inactive Ventilation System Samples
  - Cs-137 Levels 0.496 to 5.54 pCi/g
  - Ra-226 Levels <MDA to 6.23 pCi/g
- Floor Drains
  - Cs-137 Levels <MDA to 0.697 pCi/g
  - Ra-226 Levels <MDA to 5.54 pCi/g

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#### **Building 366 Contamination**

- Ventilation System
- 4 sample areas show contamination
  - 2 samples above Ra-226 limits
  - 4 samples above Cs-137 limits
- Floor Drains
  - 4 drains show contamination
    - 3 samples above Cs-137 limits
    - 4 samples above Ra-226 limits

10/21/2003

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#### **Building 366 Release Limit**

- Established in coordination with CaDHS
- Will be based on surface readings in disintegrations per minute (dpm)
- Based on NRC Regulatory Guide 1.86
- Compared to final status survey that will be conducted after remediation

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#### IR-02 NW and Central

- Area known to contain a large number of radium devices
- Site work plan has been prepared for RASO review
- Will follow previously-established remediation protocols
- Release limit for radium is 2 pCi/g

10/21/2003

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#### IR-02 NW and Central (Cont)

- Testing will be conducted to rule out the possibility of other radionuclides or mixed waste
- All prudent safety precautions will be taken
- This action will address radiologically contaminated material or mixed waste only.

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#### **Sedimentation Basin**

- Small regrading effort in southeast area of IR-01/21 being conducted to prevent run-off
- Sandblast grit discovered at site
- As is done with all sandblast grit at HPS, samples being processed for potential radiological contamination

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#### Parcel E Shoreline Survey

- Shoreline survey covers 1-1/2 miles of Parcel E
- Radiological scoping survey conducted in Summer 2001
- Survey covered from the low tide mark up to 50 feet above mean tide

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#### **Shoreline Survey Methods**

- Shoreline was divided into 51 150foot wide grids
- Grids identified alphabetically
   A through Z and AA through YY
- Each grid divided into 3 foot lanes
- Gamma readings taken at 2 to 3 foot intervals in each lane

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#### **Shoreline Survey Results**

- Over 90,000 readings taken
- 47 samples were taken
- Focus on identifying areas of concern for future actions
- Levels elevated greater than twice background in 44 of the 51 grids
- Concentrations of elevated counts found in certain areas

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#### **Impact of Shoreline Survey**

- Identification of areas of concern
- Delineation of future actions
- Prioritization of future actions
  - Time Critical Removal Actions

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#### **Future Shoreline Actions**

- Conduct sampling at areas with highest count rates
- Time Critical Removal Actions for areas of concentrated elevated counts
  - Metal Reef Area
  - Metal Slag Area

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#### **Questions/Discussion**

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